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FAA Aviation news

AVIATION SAFETY FROM COVER TO COVER

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"Miami SUPs"

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FRONT COVER: A classic J-3 Cub on floats. (H. Dean Chamberlain photo)

BACK COVER: A Piper Seminole demonstrates its single-engine capability. (Gary Livack photo)

"Miami SUPs"

story and photos by H. Dean Chamberlain

It does have a certain ring to it, but you're right. It will never make an exciting movie title. Plus the complete title is just too long: "Miami 2001 International SUPs." But in real life, titles are not as important as what they stand for. The truth of the matter is the FAA's Suspected Unapproved Parts (SUP) program could possibly save your life someday. Before you think these are strong words for such a short title, please let me explain. The Miami part is easy—it is that city in South Florida. A city many people consider America's gateway to Central and South America, the peoples and islands of the Caribbean, and a major airway to Europe and beyond.

What many people don't think about when they think of Miami is its leading role in aviation. As an important international gateway, Miami serves U.S. as well as international interests 24 hours a day, seven days a week. As a world city, Miami is a diverse and multi-cultural city always on the move. Equally important is the fact that Miami is a city made up of many peoples from all over the world. One especially made up of peoples from the Latin culture.

With this type of dynamic global background, it is no surprise that many of the world's largest airlines serve the Miami market. Not only is Miami a major air carrier passenger city, but as the Assistant Office Manager of the Miami Flight Standards District Office (FSDO), Robert Sharrard, pointed out, Miami is also an important air cargo center for shipments going to all parts of the world with special emphasis on South and Central American shipments. Sharrard said because of the number of cargo operators in Miami some of the FSDO's 103 employees have to work the "late shift" to monitor those operators whose fleets operate from sunset to sunrise.

With this amount of air traffic, passenger and cargo, not only is Miami an important flight center, but for those not living or working in the Greater Miami area who may not be aware of it, Miami is also a major aircraft repair center. This repair work includes the repair and maintenance of aircraft parts and accessories.

As a major repair center, Miami has about 250 repair stations and approximately 10,500 FAA certificated airframe and/or powerplant mechanics. Many of the FAA certificated mechanics hold both the airframe and the powerplant certificates (A&P). An additional 60,000 to 80,000 aviation maintenance technicians work in the Miami area. Many of these maintenance technicians are not required to be certificated by the FAA. As one can see based upon these numbers, aviation plays an important role in the greater Miami economy both in terms of flight operations and maintenance.

Miami FSDO Operations Safety Program Manager Rene Alvarez (left) helps check in participants at the third annual Miami International Suspected Unapproved Parts Safety Seminar.

Ernie Scardecchio, the Miami FSDO's Airworthiness Safety Program Manager, answers questions from the audience about the safety seminar.

Overseeing all of this activity is the Miami FSDO and its team of aviation experts led by the Miami FSDO Manager Michael C. Thomas. One of the most effective ways the Miami FSDO accomplishes its oversight responsibilities is through its Aviation Safety Program. Comprised of both an (Operations) Safety Program Manager, Rene Alvarez, and an (Airworthiness) Safety Program Manager, Ernie Scardecchio, the Miami FSDO's Safety Program Managers (SPM) organized the FSDO's third annual International Suspected Unapproved Parts seminar.

You may wonder what does suspected unapproved parts have to do with Miami? As a leading aviation center with hundreds of repair stations and thousands of men and women working in aviation in the greater Miami area, there is always the possibility that one of those companies or one of those employees might violate the special trust the FAA places in its certificated mechanics and repair stations and uncertificated aviation technicians. One of those companies or employees might knowingly or unknowingly make, use, or sell a suspected unapproved part. A part that could possibly endanger you and your loved ones.

How, you may ask, could such a part that finds its way into the aviation system in Miami effect you in say, North Dakota, New York, or some point in mid-America? The answer is contained in those three little letters S-U-P. For those who may be unaware of what SUP stands for, it is the initials for the FAA's Suspected Unapproved Parts Program. In the aviation world, where some parts can cost hundreds of thousands of dollars or, in some cases, millions of dollars, there is always the possibility that some unscrupulous companies or persons may compromise the safety of others by producing, selling, or installing unapproved parts on certificated aircraft. According to one person who attended the Miami SUP training, the FAA's SUP program is only seeing the "tip of the iceberg" of the SUP problem throughout the nation. In today's global aviation environment, a bad part made anywhere in the world can be shipped in one or two days to any place in the world. An unapproved part shipped from or through Miami can be at your local airport the next day and installed in either your own aircraft or the one you could be flying on the following day. That is why everyone should be concerned about an unapproved part, regardless of where it is produced.

To combat the possibility of any SUP activities in south Florida and to educate those working in aviation in the greater Miami area of the dangers of SUP, the Miami FSDO's Aviation Safety Program Managers held their third annual (better known as the "Miami Nice Burt & Ernie Road Show") International SUPs safety meeting at Miami International Airport from February 6 through 9. According to Scardecchio, "We advertise the training internationally so that everyone can

learn about the training. There is a lot of interest in Caribbean and South American countries in SUP because everyone wants to do the right thing and to be safe. I think they are just as concerned that they are getting quality parts as anyone else."

Designed as both a SUP training session for mechanics, purchasing agents, installers, and others involved in the procurement, use, and accounting of aircraft and their parts and as a means for FAA-certificated airframe and powerplant mechanics with inspection authorization to meet their annual renewal training requirements, the program reviewed the FAA's definition of both approved parts and unapproved parts, how to document and tell the difference between the two, and what to do when a suspected unapproved part is discovered. The training concluded with a special review of the new Federal law concerning unapproved parts and the very stiff penalties contained in the new law. The new law is one example of how serious the United States Government and the FAA consider the SUP issue.

About 450 persons attended the four-day training program. Those attending the eight-hour course sessions included employees and representatives from certificated repair stations, aircraft mechanics, FAR Part 121 airlines, aircraft manufacturers, foreign operators, those involved in buying and selling parts, quality assurance people, and, in one case, a representative from a Caribbean nation's Civil Aviation Authority. Representatives from several foreign airlines and companies from South America also attended the training.

A special condensed version of the course was held on February 9 for senior executives and managers such as company presidents, chief executive officers, directors, and others who manage aviation companies in the Miami area as well as in other countries. Eighty persons attended the short course.

Although arranged and coordinated by the Miami FSDO's Safety Program Managers and sponsored by industry and government groups from the greater Miami area including the Miami Maintenance Management Council (MMMC) and the Miami-Dade Aviation Department (MDAD), the primary SUP training was provided by SUP Technical Specialists Kenneth E. Gardner, Roger N. Heard, and Les Monteiro from FAA's National Suspected Unapproved Parts office located at Dulles Airport, Virginia. Thomas R. Martin, Maintenance Unit Supervisor at the Philadelphia Flight Standards District Office, reviewed FAR Part 43 which included overhaul requirements and select parts of FAR 91 maintenance requirements. Michele Schweitzer, president, Airline Suppliers Association, a Washington DC trade organization of about 280 members—many of which are based in the Miami area—discussed the role that third party audit groups play in the FAA's Voluntary Accreditation Program outlined in Advisory Circular AC-00-56. David Johnson, Senior Special Agent, DOT/IG Office of Investigation, Fort

Kenneth E. Gardner, (above) and Roger N. Heard (below), FAA Aviation Safety Inspectors and Suspected Unapproved Parts Technical Specialists from the Washington SUP Headquarters, took turns throughout the safety meeting explaining how to identify suspected unapproved parts and the dangers of using such parts.

Participants from many of the Greater Miami area maintenance shops and repair stations attended the Third Annual "Miami 2001 International Suspected Unapproved Parts" Safety Seminar to learn more about how to detect or avoid the use of such parts.

FSDO Manager Michael C. Thomas (left) presents Michele Schweitzer, President of the Airline Suppliers Association, a certificate for her presentation at the seminar. Schweitzer discussed the role industry plays in the suspected unapproved parts arena.

Lauderdale office, explained the new Safety Act 2000.

Since this SUP training qualified for the FAA's Aviation Maintenance Technician (AMT) Awards Program, Scardecchio explained how the program recognizes both individuals and their companies for certain types of aviation related training.

So, what does all of this proactive SUP training mean to you?

First, if you own an aircraft, an aviation-related business, repair station, or fly on any type of aircraft, you need to continue reading. The information may save your life, the lives of your loved ones, or your business if you are involved in the manufacture, repair, or operation of an aircraft or aircraft related business. As stated, the new SUP law has some very serious criminal penalties for those persons convicted of a SUP violation. The law can be especially severe if an injury or death results from a SUP violation.

So how do you protect yourself from a SUP? As reported at the seminar, "The solution to the problem of suspected unapproved parts is for everyone to work together to detect and remove them from the aviation system." This includes mechanics, authorized inspectors, industry, suppliers, distributors, the FAA, FBI, U.S. Customs, and Civil Aviation Authorities around the world all working together to solve this problem.

First you need to know what a SUP is and isn't. At issue is the use and production of suspected unapproved parts (SUP) in aircraft either directly or indirectly through the installation of a complex part containing a SUP. By definition, any part that someone is not sure is an approved part is a suspected unapproved part. Are SUP parts unsafe? No one knows. To test such a part may be very costly and could involve many complex types of tests and equipment, or it could result in the destruction of the part according to Gardner. The problem with a SUP is that if it is installed in a certificated aircraft it might fail or cause the failure of a part thereby jeopardizing the safety of that aircraft. It can also invalidate an aircraft's airworthiness certificate if the aircraft is not maintained in accordance with its type certificate and the appropriate FAA rules and regulations. If an aircraft is not airworthy, that may or may not invalidate its insurance coverage in case of an incident or accident.

In one example discussed during the course, a SUP brake part exceeded the aircraft manufacturer's design specification. Initially, the users of the SUP liked the longer service life the harder brake part provided. The problem was one of those parts caused an incident when the non-conforming part caused a brake fire when the harder part heated the brake assembly beyond the design engineers' safety tolerances.

This is just one example of a situation where exceeding a design specification resulted in an incident. This is why FAA regulations require an approved part or procedure to meet the original design specifications without exceeding them. Stronger is not always better. In the case where someone wants to exceed original

design specifications, FAA normally requires an approved engineering analysis be made before approving such a change.

WHAT IS AN FAA RECOGNIZED APPROVED PART?

FAA defines an approved part as one that has been "properly designed, properly produced, properly maintained, and properly documented." "An 'approved part' is a part that is eligible to be installed on an aircraft or other type certificated product. That is a part that is designed, produced, and maintained in accordance with the regulations and is in a condition for safe operation." As one of the seminar's slides stated, "The term 'approved part,' in quotations, is a colloquial term that means a part has been produced in accordance with [FAR] Part 21, maintained in accordance with Parts 43 and 91, and meets applicable design standards."

11 WAYS AN APPROVED PART CAN BE PRODUCED

The FAA's Suspected Unapproved Parts Program Office's booklet "Detecting & Reporting Unapproved Parts" list 11 ways an "approved part" can be produced.

1. Produced in accordance with a Parts Manufacturer Approval (PMA).
2. Produced in accordance with a Technical Standard Order Authorization (TSOA).
3. Produced during the Type Certificate (TC) or Supplemental Type Certificate (STC) application process that are subsequently found to conform to the TC or STC.
4. Produced under a TC and an Approved Production Inspection System (APIS).
5. Produced under a Production Certificate (PC).
6. Produced in a foreign country and accepted by the FAA in accordance with a bilateral agreement.
7. Approved in any other manner by the FAA.
8. Standard parts that conform to established industry or U.S. specifications.
9. Owner/operator produced parts.
10. Parts manufactured by a repair station or other authorized person during alteration in accordance with an STC or Field Approval.
11. Fabricated by a qualified person in the course of repair for the purpose of returning a TC product to service.

WHAT IS AN UNAPPROVED PART?

As noted in the booklet, "An 'approved part' is a part that has been produced in accordance with Part 21, maintained in accordance with Parts 43 and 91, and meets applicable design standards." The booklet then states, "An unapproved part is a part that does not meet the requirements of an 'approved part' or a part that has been improperly returned to service." It lists the following examples of unapproved parts:

1. Parts that have been improperly maintained, rebuilt, altered, overhauled, or approved for return to service by persons or facilities not authorized to perform such services.
2. Parts that have been improperly maintained, rebuilt, altered, overhauled, or approved for return to service which are found not to conform to approved design/data.
3. Parts shipped directly by a manufacturer that did not hold either a production approval or direct ship authority.
4. Parts made or altered so as to resemble or imitate an approved part, with the intent to mislead or defraud (Counterfeit Parts).

ADDITIONAL SUP REFERENCES

SUP INTERACTIVE INDUSTRY TRAINING CD

Companies can request an interactive SUP training CD by contacting their company's principal maintenance inspector, a local FSDO airworthiness aviation safety inspector, or the National SUP Program Office at Dulles Airport.

ADVISORY CIRCULARS

Advisory Circular (AC) 00-56, Voluntary Industry Distributor Accreditation Program, dated 9/5/96.

Advisory Circular (AC) 00-58, Voluntary Disclosure Reporting Program, dated 05/04/98.

Advisory Circular (AC) 20-62D, Eligibility, Quality, and Identification of Aeronautical Replacement Parts, dated 5/24/96.

Advisory Circular (AC) 20-142, Eligibility and Evaluation of U.S. Military Surplus Flight Safety Critical Aircraft Parts, Engines, and Propellers, dated 2/25/00.

Advisory Circular (AC) 21-41, Continued Use of MIL-S-8879C, General Specification For Screw Threads, Controlled Radius Root With Increased Minor Diameter, dated 2/26/99.

5. New parts that have passed through a Production Approval Holder's quality system, but do not conform to the approved design/data.

BUYER BEWARE SIGNALS

The booklet lists some things that might signal a possible SUP. Those buying or ordering parts many want to question parts that meet the following criteria. This is not to say that such parts are unapproved, but only that history has shown when a deal is too good to be true, it probably is.

1. Quoted or advertised price is significantly lower than the price quoted by other suppliers for the same part.
2. Delivery schedule is significantly shorter than that of the same part when existing stocks are depleted.
3. Inability of the supplier to provide substantiating documentation tracing the part back to an approved manufacturer or a licensed maintenance provider (e.g. an air carrier or repair station). Remember: the installer is fully responsible for determining the airworthiness of a part that is sold "as is."
4. Sales quotes or discussions from distributors or other sources that create the perception that an unlimited supply of parts, components, or materials is available to the end user.

Since past FAA SUP enforcement cases have shown those companies and individuals involved in cases can be very creative, it is important that companies and individuals who buy aircraft parts take special precautions to avoid buying, using, or selling such parts. During the seminar, some of the photographs showed how one company took broken gears with metal pieces missing from the gear and welded and hand filed the gear teeth to look like the original part. The speaker pointed out how some companies or individuals may spend more time, equipment, and creative talent making bad parts look like new than one can imagine. But since many of the parts and items used on aircraft, particularly large aircraft, are very expensive, unscrupulous people can make a lot of money selling SUP.

MIAMI: AN "IDEAL" UNAPPROVED PARTS CITY

Like other important U.S. international cities such as the Dallas/Fort Worth and San Diego areas, there are a lot of import and export activities taking place daily in Miami. Included in this traffic is a lot of aviation parts being shipped to and from the United States. Frankly, simply stated, it is sometimes difficult to track all of those aviation parts. This is one reason the FAA's SUP team travels around the country conducting training seminars. The FAA and regulatory enforcement can't do the job alone. It is important that everyone in aviation becomes aware of

HIGHLIGHTS OF NEW LAW AND HOW TO CONTACT DOT/OIG

The Aircraft Safety Act of 2000 as outlined in H.R. 1000, Wendell H. Ford Aviation Investment and Reform Act for the 21st Century puts real teeth into the SUP program. Included in the Act are offenses and penalties for both aircraft and space vehicles. Under the meaning of the Act, this includes civil, military or public aircraft and spacecraft and all aircraft or spacecraft parts.

Without listing specific offenses and penalties, anyone dealing in aircraft or space vehicle manufacture, maintenance, or parts in interstate or foreign commerce needs to research the law and especially the penalties for conviction of any offense under the Act. Depending upon the specific violation and conviction, fines can vary up to $20,000,000 for a company with individual jail terms for those convicted under the Act from 10, 15, and 20 years to life in prison if a death results from a violation of the Act.

The Act also permits a court to order the dissolution or reorganization of a company convicted of certain offenses under the Act as well as ordering the divestiture of a person's interest in aviation related business or businesses. The Act also permits criminal forfeiture of holdings for specific violations of the Act.

Since the Act is very explicit, readers should consult their attorney or review the Act themselves for more information about the new public law. The intent of this brief summation is only to make everyone aware that significant changes have been made in the Federal statutes dealing with SUP and related activities. This summary does not include all of the sections of the Act.

Anyone who feels that a violation of the law or is aware of a SUPs related violation has occurred can contact the FAA's National Suspected Unapproved Parts Office, or one of the nine Office of Inspector General Investigative Regions or the Department of Transportation Office of Inspector General in Washington, DC. The Washington Office's address is DOT-OIG, P.O. Box 23178, Washington DC 20026-0178. Its OIG web address is <www.dot.gov/oig>. The DOT/OIG National Hotline is 1-800-424-9071. The DOT/OIG's website provides information on both the OIG and its nine regions.

SUP and the dangers it poses. This is one of the reasons the Miami FSDO coordinates the annual SUP training in Miami. As stated throughout the seminar, the key to eliminating the global SUP problem is education and effective regulatory enforcement.

Education is very important said one of the attendees at the Miami seminar. He used the example of young aviation mechanics starting out in the business. He said these newly certificated aviation mechanics or trainees may get a job in a shop where the older, experienced workers have them working on projects either using unapproved parts or even making such parts. In some cases, the new employees may question what they are doing. A typical answer they may be given is the old stock answer, "That is the way we have always done it." Or, in some cases, the young worker needs the job so bad, he or she simply is afraid to challenge what they have been told to do. It is important that such young mechanics be trained on the dangers of SUP and how to recognize a SUP. Equally important is that such mechanics know how to report SUP to the FAA. First they need to be trained on what a SUP is. Then they need to lean how to fight the problem.

HOW TO FIGHT THE SUP PROBLEM

The first step is to attend SUP training such

GOING FOR THE DIAMONDS

In talking with participants at the SUP meeting, two were interviewed about both their attendance and their support of the Miami FSDO's safety efforts in the Miami area. One was the President of Aircraft Systems Michael A. Foreman. The second was Scott Rich, Vice-President, Quality, for Aircraft Systems. According to them, Aircraft Systems makes SUP training mandatory for those employees involved with the purchasing, processing, and distribution of parts and of course both Foreman and Rich attended executive segment of the training.

Aircraft Systems, a company with 50 employees specializing in hydraulic components for large air carrier type aircraft, is an active participant in the FAA's Aviation Maintenance Technician (AMT) Awards Program. Starting eight years ago, the company has received the AMT Program's Diamond Award for each of the last seven years. The company received a Silver Award the other year. For the last three years, the company has had 100 percent participation in the AMT Program. When asked, Rich who is also an A&P, FAA/ODAR, Miami FSDO Safety Counselor of the Year 1998-2000, and the FAA's Southern Region AMT of the Year 2000, said, "Aircraft Systems participates in the FAA's AMT program because it enhances safety, the individual employees who receive the awards appreciate the recognition, and it promotes, I don't want to say competition, but it makes the employees want the training. It is good for our customers, and it is good for marketing." "We are a small company so it is easier for us to maintain 100 percent than say a company with 100 employees," he said. The company has 27 AMT eligible employees so when one or more is out for training, the person is missed, but Rich said the company feels training is important.

When asked how the AMT program is good for marketing, Rich said one of the benefits is it doesn't really cost the customer anything. "In our case, management fully supports the program and the few hours needed for training our employees promotes safety," he said.

Foreman said he supports the AMT Program because it benefits both the company and the employees. It is continuing education for our employees. "I think it promotes well being in the company because it betters each person. When they leave or get a job with an airline, they are always asked for their training records, and it is good for them to have the training. So it benefits both the company and the employee," he said.

To learn how the FAA's AMT Program can benefit your company and employees, you can contact your local FAA Flight Standards District Office (FSDO) Airworthiness Safety Program Manager. You can also review Advisory Circular (AC) 65-25B, Aviation Maintenance Technician Awards Program, which explains the program in detail.

as the course given in Miami. Everyone needs to learn what is an approved part and what is a SUP. Everyone needs to learn how to recognize what is the correct documentation necessary to support an approved part. To help everyone involved in aviation learn more about what is and what is not an approved part, the FAA's SUP Headquarters team presents its training courses around the country. Contact your local FSDO Airworthiness Safety Program Manager or the national SUP team at (703) 661-0580. The National SUPs office fax is (703) 661-0113.

The second way is to only buy your parts from known, trusted, and certified suppliers and dealers. The old adage of "Buyer Beware" is still true even in the highly regulated aviation business. Or as Ernie Scardecchio said in Miami, "If it sounds to good to be true, it probably is."

HELPFUL SUP PREVENTION TIPS FOR COMPANIES

1. Secure and control yellow tags.
2. Check for correct documentation.
3. Ensure proper disposition of scrap parts. Positive destruction of parts and items is important so they can't be reused.
4. Know the complete disposition trail of scrap parts after they leave company control or trash bin to prevent anyone from getting access to the parts and reusing them.
5. Develop a system to prevent non-serialized bad items from being mixed in with good items.
6. Develop a system to control life limited components and how to destroy them when their useful life is gone.
7. Be aware of new life limited cards on old components, the use of white out to hide real time hours, and any red flag items such as creative copying.
8. Bearings are a problem. Any equivalent item without any approval document is a SUP.
9. When checking bearing seals, you should look for an OEM part number on it to ensure it has the correct grease. Is it an automobile bearing? Are the correct seals used in the bearing? These are just a few of the items to check when buying, installing, and checking seals.
10. Data plates: Is it the correct one?
11. If standard hardware is being used, is it the correct aviation quality item such as properly marked bolts?
12. Do you have an ongoing training program for those who buy and use items in your company or shop?

These are only a few suggestions from the Miami SUPs seminar in the war on suspected unapproved parts. It is a never ending global war, but with reputable companies taking an active role in fighting the war, the damage that SUPs can cause in aviation can be reduced.

With an active regulatory enforcement program, hopefully, those who try to benefit by making, selling, or using SUPs will be forced out of aviation. There is no room in aviation for anyone willing to risk someone's life for a few dollars of profit.

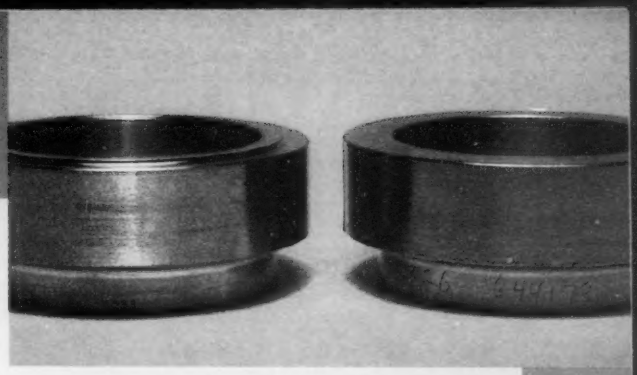
HOW TO REPORT A SUSPECTED UNAPPROVED PART

Suspected unapproved parts can be reported to the FAA by submitting FAA Form 8120-11, Suspected Unapproved Parts Notification to the Federal Aviation Administration, SUP Program Office, AVR-20, 45005 Aviation Drive, Suite 214, Dulles, VA 20166-7541. The form can also be sent electronically by the Internet. The form is available from your local Flight Standards District Office (FSDO), in Advisory Circular 21-29, or on the FAA's website at http://www.faa.gov/avr/sup.htm.

Suspected unapproved parts may also be reported by calling the FAA's toll-free Aviation Safety Hotline at 1-800-255-1111.

Miami Maintenance Management Council

The Miami Maintenance Management Council is an important supporter of the FAA's Safety Program in the Miami area. According to Scott Skelton, the Miami FSDO Airworthiness Safety Counselor of the Year for 2000 and the Aviation Maintenance Technician of the Year for 2001, the Council was established more than 10 years ago by the airlines, cargo carriers, distributors, and repair stations in the Miami area to have a larger voice in the regulatory process and the rules and regulations that affect their work. The Council provides a forum for their concerns as well as providing a means for educating and training its members through guest speakers and training sessions such as the SUP training program. The Council works with the Miami FSDO to coordinate in-house training for its member companies throughout the year, and it supports the FSDO's safety mission throughout the Miami area. Skelton believes in training. He has earned the FAA's Diamond Aviation Maintenance Technician award for the past two years.



The History of SUPs

by Salvatore Scalone

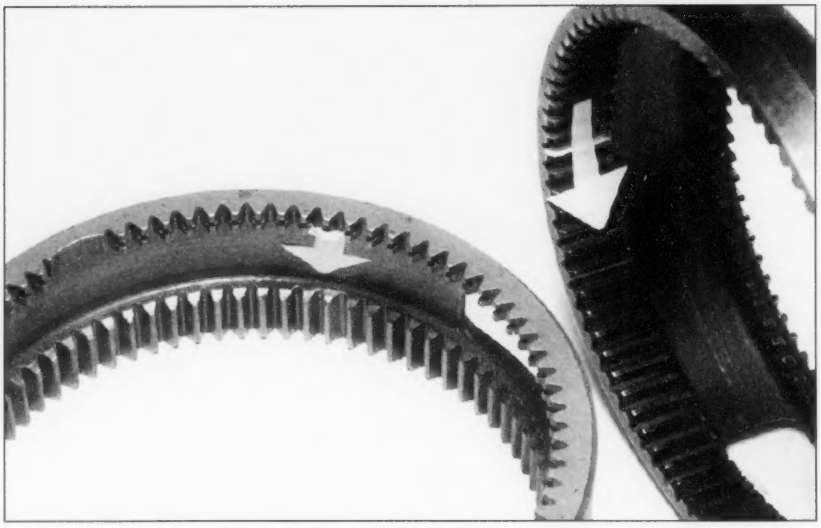
On November 15, 1995, the Suspected Unapproved Parts (SUP) Program Office (AVR-20) opened for business as a result of recommendations made by a special task force earlier that year. This office is responsible for promoting a cohesive, consistent, aggressive approach to SUP and has been extremely successful in identifying unapproved parts and removing them from the aviation system.

After the program was established, AVR-20 immediately started a nationwide aviation safety inspector and law enforcement agent training program to explain the details of this new SUP program from initial notification to final case closure. This training also includes the investigative process and is now a permanent curriculum at the FAA Academy in Oklahoma City. Only an approved part would meet the airworthiness requirements of the Federal Aviation Regulations and provide the confidence necessary to assure the integrity of a system and operational safety. Aviation safety inspectors would consider this a basic part of understanding the concept of airworthiness, therefore an unapproved part would not meet regulatory requirements.

The SUP program extends beyond the FAA and into a very active and diverse aviation community. Conversations with parts suppliers, distributors, owners/operators, and legal enforcement authorities revealed (and often still reveal) that there are many people who do not understand the importance of installing only approved aircraft parts. To combat this, seminars with the aviation community were (and still are) being held. As a result of the increase of public awareness of SUP, there has been a significant increase in SUP notifications and investigations.

Adding strength to FAA's SUP efforts is the strong support of other government agencies. A Letter of Agreement—which was signed by FAA, Department of Transportation's Office of the Inspector General (DOT/OIG), FBI, Defense Criminal Investigation Service (DCIS), and U.S. Customs—provides for an exchange of information relevant to SUP investigations. The primary objective of the agreement is to promote the highest level of safety in the U.S. aviation system by facilitating the investigation and processing of SUP reports. These legal enforcement authorities have become an effective partner in the battle to stop unapproved aircraft parts and those individuals who profit from their manufacture and/or sale.

An aircraft is considered safe when it is in airworthy condition. Airworthiness means the aircraft conforms to its type certificate and is in condition for safe operation. Risk is increased when an aircraft part can not perform its design function. Unapproved aircraft parts may not consistently perform their intended function. When an air-



(Top) An operator tried to build "new" teeth in this ring to replace broken ones by welding in metal and filing it down to match the others in this SUP's ring. (Bottom) Sometimes it is hard to tell a good part from a bad one just by looking without knowing what a good one looks like.

craft part does not conform to its approved design (consistent with the drawings, specifications, and other data that are part of the type certificate, supplemental type certificate, or field approved alterations), it is uncertain how the part will perform when installed. An installed unapproved part increases risk, reduces safety, and could introduce an unexpected threat to an operating aircraft.

If this sounds a little confusing, think of the mechanic who installs a brake master cylinder on your car. If the master cylinder is an approved part (properly designed and manufactured) and was properly installed, you would have reasonable assurance that it will consistently perform its intended function. Your vehicle will stop each and every time you want it to stop. The installation of an unapproved master cylinder increases risk, reduces safety, and could introduce an unexpected threat to the safe operation of the vehicle.

Because of the inherent danger of unapproved aircraft parts, they must be kept out of the system and off the aircraft. The SUP program has demonstrated the most effective approach to dealing with SUP parts. The entire industry must continuously be proactive in identifying and removing them. Additionally, we must stop those individuals who attempt to profit from the intentional manufacture and/or sale of unapproved parts. Their priorities are not safety first.

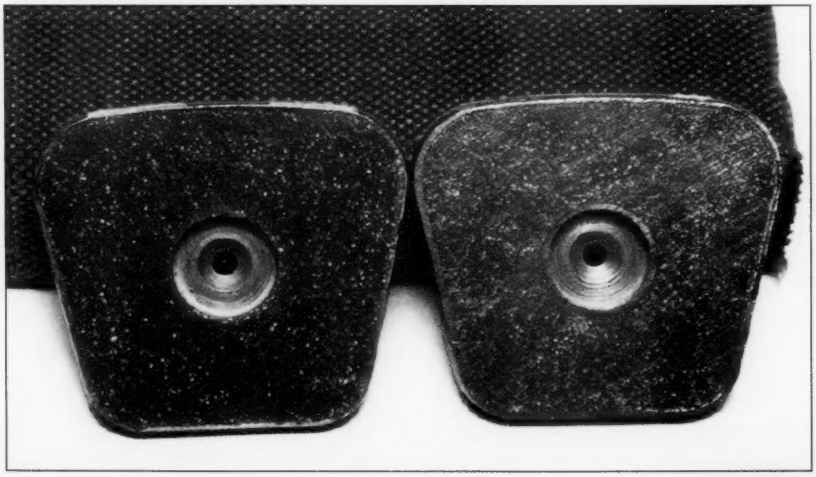
Anyone can report a Suspected Unapproved Part. AVR-20 is the focal point and notification can be as simple as a telephone call. The FAA Aviation Safety Hotline may be called at 1-800-255-1111 to report any conditions affecting aviation safety, which includes SUP reports. In addition to the Safety Hotline, any FAA office can take SUP information and forward it to AVR-20 or an individual can call AVR-20 directly to make notification. Dedicated AVR-20 specialists review each SUP notification, which often results in an official SUP investigation. The identity of the individual reporting a SUP can be kept confidential. You only need to ask.

FAA Form 8120-11, Suspected Unapproved Parts Notification, includes instructions for completion and identifies the information needed to initiate a SUP investigation. This form is commonly referred to as "The Most Important Form in the SUP Process." This is because it contains the information on the part or material that the people in the field have found to be in a questionable state. It must be noted that the information transmitted on this form will assist the Technical Specialist at AVR-20 to determine what the reporter has found. If the information is incomplete, it may result in the loss of an investigation allowing the parts or materials to saturate the industry until all the information is reported. The form is included in Advisory Circular 21-29B and can also be found at FAA Offices or on the SUP Program website : <http://www.faa.gov/avr/sups.htm>. Completed forms should be sent to the SUP Program Office at:

FAA, SUP Program Office, AVR-20
45005 Aviation Drive, Suite 214
Dulles, VA 20166-7541
Phone: (703) 661-0580
FAX: (703) 661-0113

+

Salvatore Scalone is the SUP Coordinator for FAA's Eastern Region.



"I" versus "We"

by Bill O'Brien

H.Dean Chamberlain photo and panel

Along with the pilot shortage and the mechanic shortage, there is also a parts shortage that plagues the general aviation industry. Because supply and demand are out of balance the cost of new and used parts seem to increase every day. Let's examine the reasons why this is so.

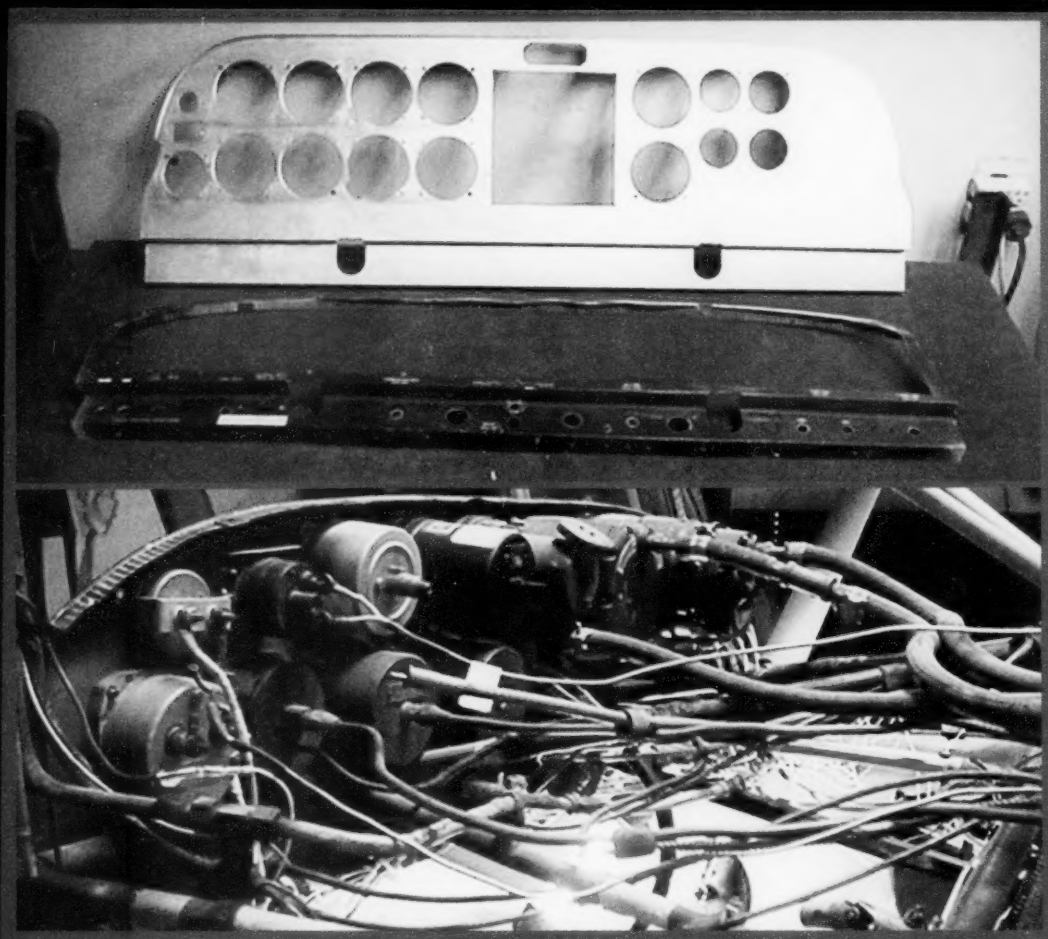
First, we have an old fleet. The average general aviation (GA) single engine airplane is approximately 32 years old. The average age of GA multi-engine reciprocating aircraft is close to 27 years old. The average age for the turbine powered multi-engine propeller driven aircraft average out around 19 years of age. So because of long term wear and tear the demand for replacement parts and large sub-assemblies is much greater today than it was even 10 years ago.

The second reason is our general aviation fleet has been well maintained over the years. So well maintained in fact, the average GA aircraft with a mid-time engine and decent avionics has appreciated to two or three times its original purchase price and is still climbing. Yet even in that land of many zeros the older aircraft are still substantially lower in price than the cost of a brand new aircraft with similar performance numbers and equipment. So the value of older aircraft in good shape are proven investments that over time have beaten the DOW JONES average. So we have an economic imperative on the part of the owners to keep maintaining older aircraft in flying condition which increases the demand for replacement parts.

The third reason is the increasing production costs to make a part. Today aircraft manufacturers are not making makes and models of aircraft in the same quantity they made them back in the Seventies. So the production runs for parts are not as frequent and not as many parts are produced. In addition, it is not cost effective for a manufacturer to make a lot of parts even if the unit price for each part is out of this world because taxes on maintaining a large inventory of parts would eat all of the profits. This low parts production keeps the supply of replacement parts low.

The fourth reason is that some manufacturers would prefer that their older makes and model aircraft—made a million years ago—would quietly disappear from the aircraft registry. This retroactive birth control on the part of the manufacturers may seem not to make any sense until you look at aircraft market dynamics of creating demand and reducing costs. First, each older aircraft that is no longer in service creates a demand for a new, more expensive aircraft to take its place. Second, despite some tort claim relief granted to GA manufacturers in the early Nineties, the fewer older aircraft there are in service, the manufacturers of those aircraft enjoy reduced overall liability claims and ever decreasing continuing airworthiness responsibilities.

So how are we going to maintain these older aircraft with an ever dwindling parts supply when Part 21, section 21.303 Replacement and modification of parts, requires us to use the



Making Order Out Chaos: How do you bring a basic VFR 1953 Piper Tripacer panel with its one communications /navigation (comm/nav) unit and almost half century old instruments into the 21st Century? An owner-produced part is one answer such as this new IFR instrument panel being designed for a new GPS/comm/nav system and instruments.

Parts Manufactured Approval (PMA) parts on a type certificated product? Well, the same rule grants four exemptions to the PMA requirement.

1. You can use parts produced under a type or production certificate such as a Piper, Cessna, or Mooney produced part;

2. A owner or operator produced part to maintain or alter their own product;

3. Parts produced under a Technical Standard Order (TSO) such as radios, life vests and rafts, and GPS; or,

4. A standard aviation part such as fasteners, washers, or safety wire.

Before I segue into the subject of "owner produced parts" as called out in section 21.303, which is the purpose of this article. I would like to create a small uproar with this statement: "FAA Airframe and Powerplant rated mechanics can maintain, repair, and modify parts, but they cannot make a brand new part and call it a repair." Before you accuse me of losing dendrites by the minute, check out section 65.81 General privileges and limitations. The section talks about maintenance, preventive maintenance, and alterations, but not the manufacturing of parts. Nor is it an implied privilege in Part 65, because Part 21 section 21.303 says "no person" may make a replacement part for a type certificated (TC) product unless that person has a PMA, etc.

While I write this I can remember 25 pounds ago and when I had hair, I worked in the real world and I specialized in making engine baffles for Lycoming engines. Before someone accuses me of bureaucratic ventriloquism which is roughly translated as "talking out of both sides of my mouth." My weak defense is, I made the parts because I thought I could." It never dawned on me that I could not legally make a part. Some of you may be astounded that I make this confession freely. It's no big thing because I know the statue of limitations has run out years ago and a jury of my peers would never look me in the eye and convict me.

So here is our problem that we must solve. Since mechanics cannot legally make parts for aircraft and aircraft need replacement parts, how are we going to keep the fleet flying? If we cannot find PMA, TSO, standard, or production holder replacement parts, we are left to make the part under the owner-produced option under section 21.303(b)(2). However, we must remember that the part is for the owner/operator's aircraft only and is not manufactured for sale to other TC aircraft.

To get through confusing regulatory policy with our pride intact, let's try the question and answer routine. (Note: This policy is taken from FAA 's AGC-200 policy memorandum to AFS-300 on the definition of "Owner-Produced Parts" dated August 5, 1993)

Question 1: Does the owner have to manufacture the part him or herself in order to meet the intent of the rule?

Answer 1: No, the owner does not have to make the part him or herself. However to be considered a producer of the part he/she must have participated in controlling the design, manufacturer, or quality of the part such as:

1. provide the manufacturer with the design or performance data from which to make the part, or
2. provide the manufacturer with the materials to make the part, or
3. provide the manufacturer with fabrication processes or assembly methods to make the part, or
4. provide the quality control procedures to make the part, or
5. personally supervised the manufacturer of the part.

Question 2: Can the owner contract out for the manufacture of the part and still have a part that is considered "owner-produced?"

Answer 2: Yes, as long as the owner participated in one of the five functions listed in Answer 1.

Question 3: Can the owner contract out the manufacture of the part to a non-certificated person and still have a part that is considered "owner-produced?"

Answer 3: Yes, as long as the owner participated in one of the five functions listed in Answer 1.

Question 4: If a mechanic manufactured parts for an owner, is he/she considered in violation of section 21.303(b)(2)?

Answer 4: The answer would be no, if it was found that the owner participated in controlling the design, manufacture, or quality of the part. The mechanic would be considered the producer and would not be in violation of section 21.303(a). On the other hand, if the owner did not play a part in controlling the design, manufacture, or quality of the part, the mechanic runs a good chance of being in violation of section 21.303 (b)(2).

Question 5: What kind of advice can you give on how a mechanic can avoid even the appearance of violating section 21.303(b)(2)?

Answer 5: First, a mechanic should never make a logbook or maintenance entry saying that he/she made a part under his certificate number. This foopah will send up a flare and get you undue attention from your local FAA inspector, which you could do without. However, the mechanic can say on the work order that he helped manufacture an owner-produced part under section 21.303 (b)(2).

Second, the owner or operator should be encouraged to make a log book entry that is similar to section 43.9 maintenance entry that states: The part is identified as an owner produced part under section 21.303 (b)(2). The part was manufactured in accordance with approved data. The owner/operator's participation in the manufacturer of the part is identified, such as quality control. The owner must declare that the part is airworthy and sign and date the entry.

Question 6: Is there anything else a mechanic must do?

Answer 6: The mechanic must ensure that the owner-produced part meets form, fit, and function, and, within reasonable limits, ensure that the part does meet its approved type design (e.g. like looking at the approved data used to make the part). Then the mechanic installs the part on the aircraft, makes an operational check if applicable, and signs off the required section 43.9 maintenance entry.

Question 7: What is the owner responsible for and what is the mechanic responsible for concerning owner-produced parts?

Answer 7: The owner is responsible for the part meeting type design and being in a condition for safe operation. The mechanic is responsible for the installation of the owner-produced part being correct and airworthy and for a maintenance record of the installation of the part made.

Question 8: How does the owner or operator get the approved data to make a part if the manufacturer and other sources are no longer in business?

Answer 8: For aircraft that the manufacturer is no longer supporting the continuing airworthiness of, the owner or operator can petition the FAA Aircraft Certification Directorate under the Freedom of Information Act for the data on how the part was made. Or the owner or operator can reverse engineer the part and have the data approved under a FAA field approval or, if it is a really complicated part, have the data approved by a FAA engineer or FAA Designated Engineering Representative.

Question 9: What happens to the owner-produced part on the aircraft if the original owner sells the aircraft?

Answer 9: Unless the part is no longer airworthy, the original owner-produced part stays on the aircraft.

I hope that I spread some light on the murky subject of owner-produced parts, so the next time instead of saying to the owner of an broke aircraft: "Sure, 'I' can make that part," you will now say "Sure, 'WE' can make that part."

Bill O'Brien is an Airworthiness Aviation Safety Inspector in FAA's Flight Standards Service. This article also appeared in the Aircraft Maintenance Technology *magazine.*

KENTUCKY "WINGS"

The FAA's Pilot Proficiency Award Program, informally known as the "WINGS" program, remains the most visible and dramatic indicator of pilot participation in the FAA's Aviation Safety Program. However, the actual awarding of the WINGS certificate and pin are only the tip of the iceberg. The award really represents a great deal more, because the pilot has to first be sold on the merits of the program and must then attend a safety seminar and receive three hours of dual instruction.

In Kentucky, the "WINGS" program has had a relentless "salesman" in the person of the Louisville Flight Standards District Office's (FSDO) Safety Program Manager, Bruce Edsten. When possible, the awards are made in person at a safety seminar, and all awardees are mentioned by name in the quarterly newsletter. Both practices provide individual recognition, which enhances the pilot's pride of accomplishment, and further promotes the program in the eyes of the aviation community as a whole. For the last ten years, this FSDO's numbers have represented involvement of local pilots that is far above the national average. Currently, the number of "WINGS" awarded to District pilots is nearly double the percentage of pilots nationally.

For those unfamiliar with the National "WINGS" program, participation requires two things: Attend at least one FAA-sponsored or sanctioned aviation safety seminar and receive three hours of flight instruction during a twelve-month period. After the application card is submitted to the Safety Program Manager, the pilot will receive a certificate and a "WINGS" pin for Phases I through X. For Phases XI through XX, the pilot will receive a certificate. For more details see Advisory Circular 61-91H, Pilot Proficiency Award Program, or talk to your local Safety Program Manager.

Given the popularity of the program, it comes as no surprise that many local Kentucky pilots have long since passed the Phase X mark, where they received the last of the official "WINGS" pins. Area pilots have been clamoring for the visible, wearable recognition of their accomplishments that had always been part of the first ten Phases of the "WINGS" program.

Edsten's involvement with the "WINGS" program even extends to the design of the awards themselves. In 1992, his design for the Phase X pin was adopted for the National program, and the pin has been in the field for several years. At the urging of several area pilots, he went back to the drawing board again, and designed another series of pins for the advanced phases of the program. Tom Payette—a local pilot, "WINGS" Program participant, and car dealer—assisted in the production of these unofficial pins, which became available to Kentucky pilots in September of 2000. With several pilots already in the high 'teens, it was hoped that someone would qualify for Phase XX very soon, so the motto for the Kentucky Wings Weekend became "20 in 2000."

However, that milestone was not reached until December 1, when Rodney Douglas of Powderly, KY, completed the requirements. Douglas is a tireless supporter of the "WINGS" program, volunteering as a flight instructor at many "Wings Weekend" events during the last ten years, and organizing several of them at Muhlenberg County, his home airport where he operates Douglas Aviation. "The guy who is flying a lot is not the one we need to worry about," says Rodney, "but the "WINGS" program has been a really useful tool for knocking the rust off the guy who doesn't fly very much." Pretty hard to disagree with that, given the statistics surrounding the program! "WINGS" participants have far fewer accidents than other pilots, and the accidents they do have are likely to be less severe.

An annual event for the Kentucky FSDO is an awards ceremony held in conjunction with the monthly Safety Seminar held at the Aero Club on Louisville's Bowman Field. As usual, many awards were presented at the February 15th event, but this year was completely unique in that the first Phase XX pin was awarded to Douglas. In honor of the achievement, a special plaque was commissioned by the FSDO, noting the date of completion, and featuring Phase I and Phase XX pins with the inscription "Phase I to Phase XX" between them.

Rodney Douglas (left) is awarded a special Phase XX "WINGS" plaque from the Kentucky FSDO's Safety Program Manager Bruce Edsten.

Private Pilot Airplane Aeronautical Knowledge Review

by Frank Phillips, Jr.

"It's a beautiful day! Let's go fly!"

How many times have you heard or said these words? Before you go, here's a refresher list of things you should remember from your student pilot days. It's also a good reminder of the many facts needed to pass the private pilot-airplane practical test.

Remember, for any flight, determine runway lengths, weather, fuel, and alternate courses of action.

WEATHER

BRIEFING Call 1-800-WXBRIEF, give aircraft number, route, etc. Request NOTAM's.

TERMS

Airmet: Issued for moderate icing and turbulence, winds 30+ knots, visibility less than 3 miles, ceilings below 1,000'

Sigmet: Issued for all aircraft for severe/extreme turbulence, icing, obstructions to visibility

Convective Sigmet: Issued for tornadoes, lines of thunderstorms; embedded thunderstorms; hail 3/4"+

Ceilings: Height AGL of lowest reported layer of clouds (broken, obscuration, or overcast)

Cumulonimbus: Clouds with the greatest turbulence—avoid by 20 NM.

Dewpoint: Temperature at which visible moisture forms

Fog:

Advection or upslope fog depends on wind to form.

Radiation fog forms when warm, moist air flows over low, flat land on clear, calm nights.

Front: Boundary between two air masses, indicated by a wind shift.

Warm Front: Temperature inversions (goes up with altitude); poor visibility; smooth/stable air; stratiform clouds; drizzle; fog (from evaporation)

Cold Front: Temperature goes down with altitude; good visibility; turbulence/unstable air; cumuliform clouds

Structural Icing: forms in freezing rain

Thunderstorms: lifting, moist, unstable air and lightning (always); develop/cumulous stage = updrafts; mature stage = rain; dissipating = downdrafts

Squall Line Thunderstorms: narrow band of thunderstorms, most intense hazard to aircraft

Winds: aloft reported true, in knots; on ground reported as magnetic

PILOT

I'M SAFE?

Illness?
Medication?
Stress?
Alcohol?
Fatigue?
Eating?

Alcohol: Do not fly within 8 hours of consumption; while under the influence; with more than 0.04% BAC

To act as PIC: Need pilot, medical certificates, and a flight review within 24 calendar months (WINGS Program can substitute for flight review)

To carry passengers: Preceding 90 days 3 takeoffs and 3 landings in class; and for night (1 hour after/before sunset/sunrise) or tail wheel airplane must be to full stop

AIRPLANE AND FLIGHT

A R O W

Airworthiness certificate
Registration certificate
Operating limitations
Weight and Balance

Airplane inspections Airplane must have annual inspection, plus 100 hour if used for hire, and AD compliance

Airplane airworthiness Owner/operator maintains, but **PIC** (operator) is responsible to determine

Angle of attack (AOA) Angle between relative wind and chord. Increase AOA, increase lift & drag. [NOTE: Increasing weight or wing loading will require additional lift]

Stalls Can occur at given angle of attack, at any airspeed, any attitude
Stall speed increases with weight (higher angle of attack for more lift)
Turns increase stall speed (higher load factor or effective weight in turn)

Spins Airplane must be stalled to spin (a spin is an aggravated stall)

Fuel (required for VFR) To intended destination with 30 minutes reserve (45 at night) at normal cruise

Emergencies Pilot may deviate from any rule to meet an emergency

PERFORMANCE

Basic empty weight Unusable fuel plus optional equipment, found in airplane documents

Center of Gravity ***AFT*** **-** worse stability, lower stall speed, better performance
FORE **-** better stability, higher stall speed, worse performance

Density altitude (DA) Determines performance; goes up with hot temperatures and low air pressure

Pressure altitude Set altimeter to 29.92" or calculate (one inch equals approximately 1,000')

OPERATION

Aircraft position lights Right – **green;** left – **red;** tail – **white;** turn lights on sunset to sunrise

Seatbelts Brief occupants *on use* and notify *to fasten* before takeoff or landing

Crosswind taxi *From front*: aileron up into wind
From rear: aileron and elevator down

Airspeed Indicator *White arc* shows flap range
Green arc shows normal range
Yellow arc shows caution
Red line shows never exceed speed

Magnetic compass Lag North of E/W; lead South of E/W
On E/W heading, **A**ccelerate **N**orth; **D**ecelerate **S**outh (ANDS)

Ground effect Airplane may become airborne before normal take off speed

P-factor High pitch and power causes left yaw (rotation at takeoff gives noticeable P-factor)

V_x Speed for *best angle of climb* - achieves the *most altitude gain* over *distance*

V_y Speed for *best rate of climb* - achieves the *most altitude gain* over *time*

High engine speeds/ high pitch attitudes Will cause *high engine temperatures*

Float Type Carburetor Prone to *induction icing* in high humidity at 20°-70°F.

Carburetor heat Enriches mixture.

Power loss Fly the airplane, then establish best glide speed, look for field to land, use emergency checklists

Severe turbulence Maintain level flight attitude and use **V_a** (*maneuvering speed*) or lower

V_a Not shown on airspeed indicator; varies with-weight: weight goes down, V_a goes down

ENVIRONMENT

Airspace *Class A*: (18,000' MSL and above) set altimeter to 29.92", and requires IFR flight plan
Class B: (blue line) *clearance required to enter*, need Mode C within 30NM
Class C: (magenta line) 2-way communication and Mode C required
Class D: (dashed blue line) has operating control tower, 2-way communication required
Class E: starts 1,200' AGL, but within magenta tint line starts at 700' AGL and within dashed magenta line (surface area Class E) starts at surface
Class G: is not depicted on charts (uncontrolled airspace)

Operating control tower In Class ***E*** or ***G*** (blue) 4 NM, 2500' AGL; must communicate

MOA Use caution.

Restricted Area Contact controlling agency.

Prohibited Area NO, NO!

Gray line Military training routes with aircraft at 250+ knots; 4 digits, at and below 1,500' AGL; 3 digits, 0' and up; VR=VFR; IR = IFR

Federal Airway 4 NM either side of blue (Victor airway) line, from 1,200'AGL to FL180

Traffic pattern indicators Depicts direction of turns in traffic pattern

VASI "All red, you're dead; red over white, you're all right."

Airport lights Taxiways are outlined with blue lights. Runways are outlined with white lights.

Transponder **7700** = emergency
7600 = no radio

7500 = hijack
1200 = VFR

Mode C Over 10,000' MSL; A,B, & C airspace; above C; and in mode C veil (30 NM of B)

Oxygen Crew 12,500' to 14,000' over 30 min; crew all time above 14,000'; all occupants over 15,000'

ELT Test during first 5 minutes after hour and replace battery after one hour cumulative use or 50% of shelf life

Emergency Broadcast on *121.5 MHz* or *243 MHz*, FSS EFAS on *122.0 MHz*.

Right of Way (ROW)
Aircraft in distress over all other aircraft
Balloons over other aircraft
Gliders over airplanes, rotorcraft, and airships
Aircraft towing or refueling over other powered aircraft.
When head-on, go right.
Overtake to right.
Landing aircraft has ROW.
Lower aircraft on final has ROW.

No aerobatics Over *congested area* or *open air assembly* of persons; on Federal Airways, *below 1,500'* AGL; with *less than 3 miles visibility*.

Emergency priority If requested by ATC manager, submit *detailed report* within *48 hours*.

Light signals
On *GROUND*:
Green – takeoff
Flashing Green – taxi
Red – stop
Flashing Red - clear runway
Flashing White - return to starting point;
In *FLIGHT*:
Flashing green - return for landing
Red - give way/circle
Green – land
Flashing Red - airport unsafe
Red/Green - use caution.

Minimum safe altitudes
Anywhere: If power unit fails, emergency landing without undue hazard.
Sparsely populated areas: 500' AGL. No hazard to and 500' from persons/property.
Congested areas: 1,000' above highest obstacle within 2,000' radius.

Altimeter setting Use barometric pressure; if none, use field elevation. Over 18,000' set to 29.92".

VFR cruising altitudes
Above 3,000' AGL
Magnetic course 0° - 179° odd 1,000's plus 500'
Magnetic course 180° - 359° even 1,000's plus 500'

MEDICAL

Carbon monoxide Exhaust fumes. Headaches, drowsiness, dizziness. Open air vents.

Hyperventilation Caused by rapid breathing (often from stress). Hold breath or breath into bag.

Hypoxia Oxygen deficiency. Go lower or use O_2. Smoking and night increase effect.

Scanning Scan in segments of 10° for at least one second to allow eye to focus.

Spatial disorientation Temporary confusion; rely on instrument indications, not body signals.

Vision at night Scan slowly to permit off center viewing.

WAKE TURBULENCE

Vortices Be alert for the trailing wing tip vortices of large aircraft.
Landing behind: Stay at or above its flight path and land beyond its touch down point. When it is taking off, land before its rotation point.
Departing behind: Rotate before its rotation point and stay above its flight path until turning clear of its wake.
Low approaches: When large aircraft is making low approaches or touch and goes, *wait at least two minutes.*
Wind drift: Make adjustment for. Vortices will drift with wind. Vortices settle and move laterally near the ground. *Wait at least two minutes.*
When in doubt, wait at least two minutes before taking off or landing.
While en route: Avoid flight below and behind its flight path.

ACCIDENTS/ INCIDENTS

NTSB Report immediately in-flight fire, overdue aircraft, flight control system malfunction or failure, incapacity of a crewmember to perform duty due to injury or sickness, damage to property (other than aircraft) exceeding $25,000 (estimated).
Accidents: Report within 10 days.
Incidents: Report on request.

VFR MINIMUMS IN AIRSPACE CLASSES

Class	A	B	C and D E (under 10,000' MSL) G (at night)	E (over 10,000' MSL) G (over 10,000' MSL and under 2,500' AGL)	G (day time under 1,200' AGL)	G (day time over 1,200' under 10,000'
Visibility	**No***	3 statute miles	3 statute miles	5 statute miles	1 statute mile	1 statute mile
Clouds	**No***	Clear of clouds	1,000' above 2,000' from 500' below	1,000' above 1 statute mile from 1,000' below	Clear of clouds	1,000' above 2,000' from 500' below

** No VFR in Class A Airspace unless authorized by Air Traffic Control facility with jurisdiction.*

Have a safe flight! Don't forget to fill tanks at night to prevent water from forming.

Frank Phillips, Jr., is an FAA Aviation Safety Inspector in the Operations and Safety Program Support Branch, General Aviation and Commercial Division, Flight Standards Service.

HELP PREVENT RUNWAY INCURSIONS

KNOW YOUR DIRECTION...

IF IN DOUBT, ASK

(Mark Schaible photo, courtesy of EAA)

National Registry for Designated Pilot and Designated Flight Engineer Examiners

by JD Martin

Last January during the Experimental Aircraft Association's (EAA) Annual National Designated Pilot and Flight Engineer Registry Examiner Meeting, I was informed that owners, pilots, and operators of vintage and/or surplus military airplanes continue to ask questions regarding the purpose of the program, how it functions, how examiners are selected, and the role of the FAA. The examiners explained their experiences and recommended that I write an article that would address some of the questions circulating about the program. In the spirit of partnership and cooperation, I contacted the editor of the *FAA Aviation News* and she agreed to publish this article.

Background

Currently, the FAA does not have enough qualified aviation safety inspectors around the U.S. to conduct initial qualification tests under Title 14 of the Code of Federal Regulations (14 CFR) parts 61 and 63 or give proficiency checks required under 14 CFR parts 61 and 91 in vintage and/or surplus military airplanes. These airplanes are operated under part 91. Examples of these airplanes include the B-17, B-25, L-1049, and C-46 airplanes, which are operated by the EAA, Confederate Air Force (CAF), Save A Connie, and Mats Connie organizations.

To meet the demand for tests and checks in vintage and/or surplus military airplanes that require a type rating for the pilot in command (PIC), the FAA entered into a partnership with the EAA in 1993 and implemented the National Designated Pilot Examiner Registry (NDPER). The provisions of the partnership are contained in a Letter of Agreement between the FAA and EAA. This agreement provides the FAA's policy under which a National Examiner Registry Program is established and provides for the implementation of the program by the EAA with FAA oversight. The agreement was later amended to include National Designated Flight Engineer Examiner Registry (NDFEER) Examiners for Reciprocating Engine Powered Airplane.

The agreement covers governing policies for the selection process, appointment, renewal, administration, and the authority to conduct practical tests and proficiency checks by certain pilot and flight engineer examiners (registry examiners) who are authorized to perform practical tests and proficiency checks in certain vintage and/or surplus military airplanes. This registry includes, for the purpose of this program, a listing of all airplanes considered to be vintage and/or surplus military and a list of all registry examiners who have been designated in the respective airplanes.

The agreement strongly supports the FAA's commitment to providing appropriate airman certification services to all qualified airmen who may desire to operate vintage and/or surplus military airplanes that require the PIC to hold a type rating. The goal in establishing the agreement was to model an FAA/EAA partnership and to provide a service to the public by ensuring the continued preservation, static, and flight display of the broad variety of vintage and/or surplus military airplanes.

The FAA believes the agreement will encourage compliance through partnership and ensure the public's continued authorization to operate the kinds of airplanes represented while maintaining the desired safety certification and operation standards. The

success of this program is highly dependent upon the dynamics of this working partnership and the FAA is fully committed to ensuring its continued success.

Examiner Selection Process

The selection criteria for a NDPER examiner are as follows:

1. Hold and maintain a current FAA certificate of authority as a Designated Pilot Examiner (DPE).
2. Have a recommendation from the EAA.
3. Have a minimum of two type ratings in vintage airplanes.
4. Have a proven background involving the operation of vintage airplanes.
5. Have an approval of the FAA's Great Lakes Region, Flight Standards Division, Technical Programs Branch, AGL-230.

The selection criteria for a NDFEER examiner are as follows:

1. Hold a Flight Engineer Certificate with a Reciprocating Engine Powered Class rating.
2. Have a recommendation from the EAA.
3. Have a proven operating experience serving as a flight engineer in a vintage airplane.
4. Have an approval of the FAA's Great Lakes Region, Flight Standards Division, Technical Programs Branch, AGL-230.

Application

Pilots and flight engineers, who meet the selection criteria and want to become a NDPER or NDFEER, should send the following information directly to the EAA Program Administrator:

1. Resume listing their aeronautical experience and background
2. Aircraft ratings with the hours logged in each and supporting documentation
3. Copy of EAA membership card
4. Copies of current FAA Airmen Certificates, i.e. Medical, Pilot, Flight Engineer Certificates
5. Copies of current DPE or DFE certificate of authority and letter of authority
6. Letter of Recommendation from a current NDPER or NDFEER.

The application package should be sent no later than November 30 of each year. This allows for the review and screening process. The EAA responds to all applicants. Applicants, who are being considered, are invited to the annual NDPER/NDFEER meeting that occurs each January for further screening. Successful applicants are recommended to AGL-230 by letter and appropriate documentation.

Approval and Authorization

The FAA gives full and objective consideration to examiner candidates screened and recommended by EAA for designation as a NDPER or NDFEER in vintage airplanes. The FAA will ensure that the examiners meet all appropriate standards.

NDPER's and NDFEER's are issued a Letter of Authorization (LOA) by AGL-230 before conducting vintage airplane practical tests and proficiency checks under the auspices of the NDPER/NDFEER program. The LOA is required to conduct business outside the geographical boundaries of their local Flight Standards District Office (FSDO) and for conducting test or checks in a vintage airplane not listed on their local examiner designation. AGL-230 has responsibility and oversight authority over the examiner as it relates to the privileges authorized on each examiner's LOA that pertain to conducting practical tests and proficiency checks in vintage airplanes.

NDPER's and NDFEER's are authorized to accept applications for practical tests and requests for proficiency checks in any vintage airplanes that are within their airplane grouping and authorized by their LOA received from AGL-230. NDPER's and NDFEER's are responsible for all travel arrangements associated with practical tests or proficiency checks conducted under the National Examiner Registry Program. However, NDPER's and NDFEER's receiving a request for a practical test or proficiency check in a vintage airplane are required to notify AGL-230

Points of Contact

FAA PROGRAM MANAGER
JAMES "JD" MARTIN - AGL-230M
FAA Great Lakes Region
2300 E. Devon, Room 422
Des Plaines, IL 60018
(847)294-7150
(847)294-7884 Fax
j.d.martin@faa.gov
1-888-778-0495 Pager

ALTERNATE PROGRAM MANAGER
STEVE NOVOTA - AGL-230 I
(847)294-7157

EAA PROGRAM ADMINISTRATOR
RANDY HANSEN
Government Relations Specialist
1-800-236-4800, ext. 6522
(920)426-6522
(920)426-6560 (Fax)
rhansen@eaa.org

before administering the test or check. The intent of the agreement is to provide prior notice to AGL-230, so that AGL-230 can review the request and offer the FSDO or International Field Office (IFO), in whose area the test or check will be conducted, the opportunity to observe the checkride.

When not conducting practical tests and proficiency checks under the auspices of the National Examiner Registry Program, examiners operate under the authority of the local FSDO that holds that examiner's certificate of authority. Local FSDO's do not issue NDPER or NDFEER LOA's for the National Examiner Registry Program. Under the partnership agreement, the FAA retains oversight of registry examiners for vintage and/or surplus military airplanes in accordance with its designated pilot examiner program guidelines.

Obtaining the Services of a NDPER or NDFEER

Upon receipt of a request for a practical test or proficiency check in a vintage and/or surplus military airplane, field facilities should first inquire if the test or check is for 14 CFR parts 61, 121, 125, or 135. NDPER's and NDFEER's conduct tests and checks solely with regard to 14 CFR parts 61 and 63 for part 91 operations. They should then conduct a search for an FAA inspector resource. If an FAA inspector resource is located, that resource should be contacted to see if he or she can administer the test or check. If no FAA resource is located or readily available, the applicant should be referred to the NDPER/NDFEER Program.

The preferred method of obtaining the services of an NDPER or NDFEER examiner is for the applicant to contact the examiner directly. A current National Examiner Registry and Qualified Airplane Groups can also be found at <www.eaa.org> or by contacting the EAA's Program Administrator at (920) 426-6522 or the FAA National NDPER/NDFEER Program Manager at (847) 294-7150. In the event an applicant cannot obtain the services of an examiner, he or she should be referred to the FAA NDPER/NDFEER Program Manager.

All applicants must have completed appropriate ground and flight training from an FAA authorized instructor and have properly endorsed personal logbooks or other records.

When an NDPER or NDFEER has agreed with the applicant to conduct a practical test or proficiency check, the examiner sends a Prior Notification, Form 1 or Form 2, to the FAA National Program Manager via fax or electronic media. Upon receipt, the Program Manager reviews the form, conducts an airman and aircraft background check, and issues a Notification of Examiner Activity Memorandum and Special LOA (if required) to the respective FSDO or IFO Manager in the geographic area in which the test or check will originate. An office file should be established in each facility that receives a notification package for record keeping purposes. Upon completion of the test or check the examiner completes all required paperwork and submits it to their local FSDO.

When a FSDO or IFO receives the examiner activity notification package, the respective office is encouraged to notify the FAA Program Manager and advise if surveillance will be conducted. Not all examiner activity requires

NDPER QUALIFIED VINTAGE AIRPLANE GROUPS

Group A	Group B	Group C	Group D	Group E	Group F	Group G
AD-4N	B-17	B-24	C-46	C-82	Land & Sea	VC-700
G-TBM	B-247	B-377	C-47	CV-240	SK-43	VC-800
G-F3	FO-5	CV-LB30	DC-2	CV-340	SK-44	
	B-307	CV-P4Y	DC-3	CV-440	CV-PBY	
	BU-2000	DC-4	DC-3S	CV-PBY (land only)	G-73	
		DC-6	DC-B18	DC-A20	G-111	
		DC-7	DC-B23	DC-A24	SA-16	
		L-1049	HW-500	DC-B26		
			L-14	DH-4		
			L-18	FA-119		
			LB-34	FA-C123		
			PV-1	G-52		
			PV-2	G-73 (land only)		
				G-111 (land only)		
				G-S2		
				G-F7F		
				L-P2V		
				L-P38		
				M-202		
				M-404		
				M-B26		
				N-B25		
				NH-P61		

surveillance. In those instances where the facility lacks personnel with adequate experience and background, that information should be conveyed to the National Program Manager. The primary tasks of the Program Manager is to manage and coordinate examiners and the FAA Vintage Airplane Surveillance Team (VAST) member activities within FAA national guidance on matters relating to vintage and/or surplus military airplanes. However, if an VAST member is assigned to conduct surveillance, the primary task of the team member is to conduct observations on the examiners and monitor the vintage and/or surplus military airplane industry. The secondary task is to conduct certification only in vintage and/or surplus military airplanes in which they are both qualified and current in accordance with FAA Order 4040.9D. VAST members are not NDPER's and NDFEER's

Vintage Airplanes and the PTS

NDPER's and NDFEER's administer tests and checks in accordance with the appropriate Practical Test Standard (PTS). The maneuvers that can be performed safely and within the limitations of the airplane are performed. A great majority of vintage and/or surplus military airplanes do not have an airplane flight manual; most are not pressurized, and several don't have published V-speeds. In those instances where airplane performance is questionable or a possibility that aircraft limitations will be exceeded, examiners determine knowledge through verbal question and answer sessions. It must be remembered that not all like make and model airplanes have identical airworthiness certifications and/or identical installed equipment. Therefore, it is not uncommon for one applicant to be tested on a maneuver via the question and answer method and another tested via demonstration of the maneuver.

Vintage Airplane Minimum Equipment List (MEL)

Operators of vintage and/or surplus military airplanes are required to comply with applicable Federal aviation regulations, operations limitations, type data provisions, and other such directive information. Very few MEL's have been developed for the vintage and/or surplus military airplanes shown on the list of Qualified Vintage Airplane Groups. As a result, most of these aircraft operate in accordance with the provisions of 14 CFR § 91.213(d) which provides for operations conducted with inoperative instruments and equipment without an approved MEL. If an MEL has been authorized for the airplane, it must be carried on the airplane and utilized per the guidance and instructions contained therein.

Airplanes with an Experimental Airworthiness Certificate

Several NDPER's and NDFEER's hold Letters of Operational Authority (LOOA) and PIC LOA's with endorsement authority for some of the airplanes that do not have a type designation. These airplanes are usually issued an Experimental Airworthiness Certificate.

These examiners can endorse applicants for an LOA and make recommendations to the FSDO to issue the PIC LOA. Additional guidance pertaining to obtaining an LOA for PIC privileges in aircraft that have been issued an Experimental Airworthiness Certificate can be found in FAA order 8700.1, Chapter 32.

This article does not set policy nor attempts to clarify policy. All questions regarding policy should be directed to the Great Lakes Region, Flight Standards Division, Technical Programs Branch, AGL-230 to coordinate an interpretation from the General Aviation and Commercial Division, AFS-800. I hope this has explained the purpose, methods and processes of the National Designated Pilot and Flight Engineer Registry Examiner Program. If you have any questions do not hesitate to contact me at (847) 294-7150. My e-mail address is j.d.martin@faa.gov.

Areas

The Experimental Aircraft Association will:

1. Maintain records of qualification and training on each examiner at EAA Headquarters Office, Oshkosh, WI.

2. Develop, administer, and document recurrent training on each examiner.

3. When recommending an applicant for the NDPER registry, forward the following files and records to the FAA's AGL-230: record of pilot qualifications, record of training, records of operational experience in vintage and/or surplus military airplanes, letters of recommendations, and airplane groupings for which EAA is recommending the examiner applicant to be qualified for.

4. Maintain a listing of all airplanes considered to be vintage and/or surplus military airplanes and airplane grouping of those vintage and/or surplus military airplanes, and a suggested list of examiners who are "best qualified" for conducting airmen certification services in those airplanes.

5. Be responsible for maintaining the NDPER/NDFEER of airplanes and examiners. The following records will be maintained by EAA and made available to the FAA Administrator upon request—the name and address of each currently approved registry examiner; the make and model, type, and/or series of the airplane for which designated; and the date(s) the examiner satisfactorily completed the FAA's and the EAA's initial and recurrent Examiner Standardization Course(s), as appropriate.

6. Maintain an activity record to include the ratings issued and/or proficiency tests conducted by each examiner.

7. Screen and recommend candidates to FAA believed qualified for this special area of responsibility in vintage

# of Responsibility

and/or surplus military airplanes for further consideration and designation.

8. Provide information through the EAA's regular publications to inform the public regarding EAA's facilitation of the NDPER program under partnership agreement with FAA.

9. Develop, administer, and document recurrent training on a biennial basis to ensure that each registry examiner satisfactorily accomplishes the appropriate training, which will consist of the following:

(a) Issues and discussions involving standardization of evaluations (i.e., including, but not limited to, Order 8700.1, Chapter 12 or as amended)

(b) Order 8710.3C or as amended (i.e., including, but not limited to, the renewal process, selection process, conduct of practical tests, and pretest eligibility requirements for the applicant and airplane)

(c) PIC currency requirements pertaining to vintage and/or surplus military airplanes (i.e., including, but not limited to, Part 61)

(d) FAA and EAA coordination requirements (i.e., including, but not limited to, conducting practical tests outside the examiner's area of jurisdiction, letter of authorization, etc.)

(e) Review of the Practical Test Standards for type ratings

(f) Accident and incident data pertaining to vintage and/or surplus military airplanes.

(g) Service bulletins and airworthiness directives pertaining to vintage and/or surplus military airplanes.

(h) Review each examiner's records of activity of conducting practical tests in vintage and/or surplus military airplanes.

FAA's Great Lakes Region, Flight Standards Regional Office, Technical Programs Branch, AGL-230 will:

1. Issue letters of authority to each examiner that relate to the airplane grouping that the examiner is authorized to conduct practical tests.

2. Be responsible for conducting surveillance, monitoring, and supervising of each NDPER/NDFEER examiner's activities that relate to vintage and/or surplus military airplanes.

3. Be responsible for all matters relating to each examiner authority, renewal, and certification that pertain to vintage and/or surplus military airplanes.

4. Be the focal point relating to each examiner's letter of authority involving vintage and/or surplus military airplanes.

5. Provide timely coordination with the local FSDO where the examiner will conduct a practical test in a vintage and/or surplus military airplane.

6. Provide coordination with the FAA's General Aviation and Commercial Division, AFS-800, to keep that office advised on "best qualified" lists of examiners.

FAA's General Aviation and Commercial Division, AFS-800 will:

1. Be responsible for the establishment of national policy that relates to the certification, renewal, and work activities of examiners of vintage and/or surplus military airplanes.

2. Be responsible for the establishment and revisions to the Pilot Examiner Handbook, Order 8710.3C or as amended, that relate to examiners of vintage and/or surplus military airplanes.

3. Be responsible for the establishment and revisions to the General Aviation Operations Inspector's Handbook, Order 8700.1 or as amended, that relate to examiners of vintage and/or surplus military airplanes.

Local Flight Standards District Office will:

1. Issue and maintain the certificate of authority and letter of authority for each examiner in his/her local area of jurisdiction that relate to other than vintage and/or surplus military airplanes.

2. Be responsible for the surveillance, monitoring, and supervising of each examiner activities that relate to other than vintage and/or surplus military airplanes.

3. Be responsible for all matters relating to each examiner's authority, renewal, and certification that pertain to other than vintage and/or surplus military airplanes.

4. Work harmoniously with the FAA's Technical Programs Branch, AGL-23O, when receiving requests for technical assistance involving the examiners of vintage and/or surplus military airplanes.

NDPER's and NDFEER's will:

1. Work harmoniously with the FAA's Technical Programs Branch, AGL-230, and with each local FSDO office when receiving requests for airmen certification services involving vintage and/or surplus military airplanes.

2. Provide professional and courteous service to the public as the FAA's representative for conducting airmen certification services to all qualified airmen who desire to operate vintage and/or surplus military airplanes.

3. Conduct their work activities in accordance with the directions in FAA Order 8710.3C or as amended, the instructions in the appropriate practical test standards, and comply with all applicable regulations.

Maintain an activity record by name of the applicant, date of test, kind of test conducted, make and model of airplane used, and the results of the test for each practical test and/or proficiency test conducted.

RUNWAY SAFETY CORNER

by Jim McElvain

The aviation community has been inundated with runway safety speeches, tapes, videos, and programs. Yet, we seem to have had a rise in runway incidents over the past year. Surely some of the rise can be attributed to increased reporting and awareness, and no doubt traffic at busy towered airports has increased, but there has been a rise in numbers. Unfortunately, the majority of the increase is attributable to pilot deviations, especially deviations by those involved with general aviation (GA).

What the heck is going on?

GA pilots are not a group that goes about its duties haphazardly, and none of us wants to cause an accident. So, why are we showing up so negatively in the statistics? Is it poor initial training? If so, it's time to get busy and start correcting the weaknesses. It doesn't take a lot of time to review signs and markings, and a good pilot/controller communications and phraseology session is always in order. Better pre-taxi planning and the use of airport diagrams should also become a standard part of any pilot's procedures.

But, no matter what the level of airman expertise, there is still one area that I feel all of us involved in aviation must deal with. When uncertain about what is required or allowed, we often assume and push on. Is it ego (steely-eyed aviators cannot ask for clarification!), intimidation (ATC said it, so I've got to do it now!), or fear of violation (FAA is listening...don't appear not to know!) that keeps us from behaving rationally? If any of these factors are influencing your decision making process when exercising your pilot skills, you are truly making poor decisions. Let's analyze some of the ramifications of yielding to these pressures.

We aviators have long exemplified the "Damned if you do, and damned if you don't" mentality. Let's look at a probable scenario at a local fixed base operation where a strong crosswind is blowing. A pilot looks at the wind sock and says, "Too much wind for me," and decides not to fly. The "lounge lizards" are bound to reply: "Going to let a little ol' breeze like that keep you from flying?" On the other hand, if he decides to go and ends up with the aircraft in the bushes, the group is bound to say: "He should have known better than to go out in that kind of wind." Ego and intimidation factors are strong in aviation.

I recently reviewed the report of a runway incursion that had occurred at a large airport in Texas. A GA pilot had been cleared to a runway intersection for departure. After completing his run-up, the pilot contacted the tower and told them that he was ready for takeoff off. The tower replied, "1234Z, roger." After a few seconds the pilot took the runway and departed, causing a 737 on final to go around. The GA pilot made a mistake. But why? Did he honestly think "roger" meant cleared for take off? I doubt it. I will bet that he was confused by the transmission and made no effort to clarify it. Why would he do it...ego, intimidation, or fear of enforcement?

It's time for us to get over it. We're the captains of our ships and our destinies. We must have the maturity and self-confidence to overcome external and internal pressures that cause us to behave irrationally and make poor decisions. Besides, would you rather have your ego bruised by getting clarification or assistance, or by being interviewed about the accident that you caused by being uncertain and not following required rules and procedures?

Jim McElvain is the Regional Safety Program Manager for FAA's Southwest Region.

Towered Airport Operations Review

Pre-Flight/Pre-Taxi

- Pilot:
  - Is physically and mentally fit.
  - Is proficient at towered airport operations and communication. If inexperienced or not current at towered airports, consult an instructor or experienced pilot. (Take one along!)
  - Has appropriate equipment ready (airport diagram, kneeboard, pen, and headset).
  - Has current ATIS.
  - Contacts clearance delivery for IFR or VFR clearance.
  - Contacts ground control for taxi clearance.
- Aircraft: Is equipped with appropriate working radios and lights.
- Airport: Is not congested. Avoid peak traffic hours.

Taxi Procedures

- Sterile Cockpit: Avoid unnecessary conversation.
- Lights: Use available external aircraft lighting.
- Route: Use the airport diagram, and follow the taxi clearance to the runway. If unsure at any time, STOP! Clarify and ask for help or progressive taxi vectors. Verify before entering or crossing ANY runway.
- Situational Awareness: Monitor ground control to remain aware of operations that may affect your route.

Take-Off Procedures

- Situational Awareness: Monitor ground and tower frequencies to remain aware of operations that may affect your departure.
- Clearance: Read back your clearance for take off or position and hold.
- Verification: Ensure you are using the correct runway.
- Vigilance: DO NOT enter the runway until you have visually cleared the final approach for landing traffic.

Approach Procedures

- Sterile Cockpit: Avoid unnecessary conversation until reaching the ramp.
- ATIS: Copy ATIS as soon as practical
- Anticipate: Use ATIS and the airport diagram to anticipate your landing runway and taxi route to the ramp.
- Radio: Have tower and ground control frequencies in standby or ready and available.

Landing Procedures

- Lights: Use appropriate external aircraft lighting.
- Refuse: DO NOT accept any landing clearance or request (Such as Land and Hold Short - LAHSO) that you cannot meet.
- Clearance: Repeat clearance to land.
- Verification: Ensure that you are lined up on correct runway.
- Vacate: Clear the active runway, cross the hold lines, and STOP BEFORE contacting ground control.

Taxi Procedures

- Radio: Contact ground control
- Clearance: Copy your taxi clearance.
- Route: Determine your position on the airport and use the airport diagram to taxi. If unsure at any time, STOP! Clarify or ask for progressive taxi vectors. Verify before entering or crossing ANY runway.

DO YOU KNOW YOUR HISTORIC AIRCRAFT?

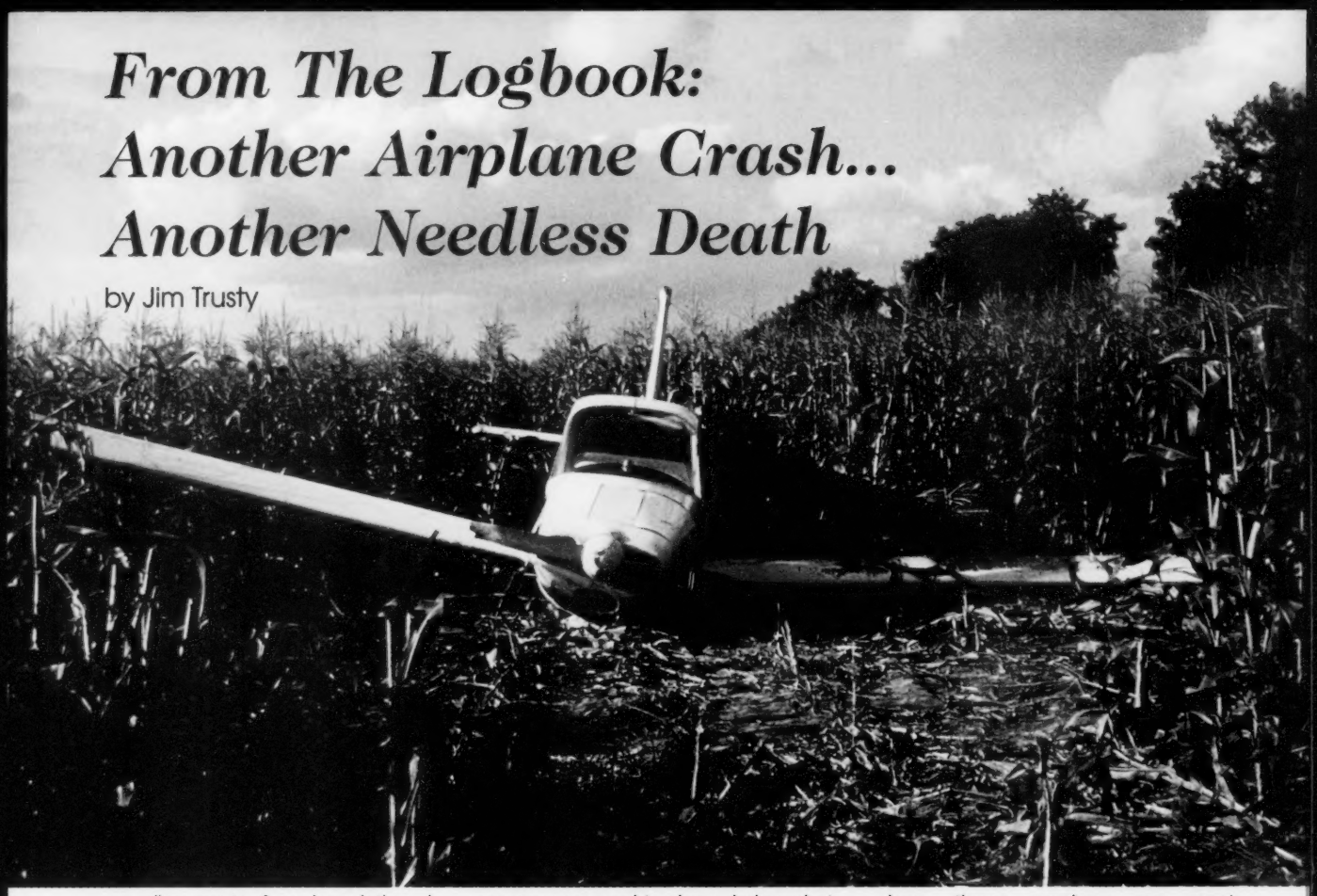
Do you know the significance of these two aircraft? Both are painted in the colors of retired U.S. Marine Corps pilot and NASA astronaut John Glenn's Korean War USAF F-86 aircraft. According to his NASA biography Glenn flew 27 missions as an exchange pilot with the U.S. Air Force in the F-86 Sabrejet during the Korean War. He flew 63 missions with Marine Fighter Squadron 311. In World War II, Glenn flew 59 missions in the Pacific with Marine Fighter Squadron 155 flying F-4U fighters.

For our younger readers, Colonel John Glenn (USMC Retired) was the first American astronaut to orbit the earth. As one of the original seven Mercury Astronauts, Glenn flew into the history books on February 20, 1962, aboard Friendship 7 when he completed a three-orbit mission. He later became a United States Senator in 1974 and retired from the Senate in 1999. In 1998, Senator Glenn became the oldest astronaut in space during a nine-day mission aboard the space shuttle Discovery from October 29 to November 7.

As for the two aircraft, there is one very significant difference between the two. Can you guess what it is? If not, turn to page 28.

From The Logbook: Another Airplane Crash... Another Needless Death

by Jim Trusty



Like most of us in aviation, I absolutely hate it when something negative happens in my little world. Most of the time we concentrate on how to keep it from ever happening again, and this article is a result of one of those times.

We just had an accident in my general area that took the life of the pilot and the really difficult thing for me was that I knew him. The safety statistics that I am always reciting go right out the window when it happens close to home and you can still see that pilot on the tarmac smiling and joking before a flight and the airplane he was killed in.

What could possibly have happened that would have caused him to not put his years of training into play and still be living today? We all have 20/20 hindsight and know what we would have done in the exact same circumstance. The big problem with that 20/20 stuff is that we can never duplicate exactly what happened, so in truth we really don't know what we would have done. All we know is what we are supposed to do and also what we hope we would do. Actuality is a different story.

The accident is still under investigation by the FAA and the NTSB, and when it is all over we will find out exactly what happened on the part of the pilot and the airplane. Seldom is it only one cause—usually the pilot and the aircraft are both involved. Aviation in general will learn a lot from the accident and some changes will be put into effect that may save lives and equipment in the future, but it is one heavy price to pay for information. And I for one wish there was an easier way to get the message across.

No record can be kept on how many potential accidents we avoid on a daily basis by quick thinking and proper use of the training we have received because pilots aren't stupid enough to tell on themselves. But if that figure were available, it would no doubt be high. However, when we as pilots fail to bring our past training into play in a timely fashion and an accident takes place, those numbers are most assuredly published at the drop of a hat.

Aviation is a much-needed industry that employs over 1,000,000 people with a yearly payroll exceeding $16 billion and contributes over $50 billion to the U.S. economy annually. I brag continuously about the safety record we have established flying airplanes, and as you read these numbers you will have to agree that we are the safest, fastest, and certainly the method of choice for most travelers. Each year we use 19,000 airports and 204,000 airplanes flown by over 600,000 pilots to deliver 650 million people. We fly 25 million hours covering nine billion miles on over 58 million flights and still our safety record says we are the safest way to get from point A to point B.

We lost, on average, about 700 people each year. We transport, on average, about 650 million people each year. Quick math says that you have nearly one chance in a million of dying in an airplane accident. These

figures have improved steadily over the last 20 years to where they are today and have made us the safest form of transportation known to man. But when we do have a crash, we manage to get great press, or I should say great coverage. No one bothers to mention at the crash site that aviation is responsible for less than 2% of all transportation deaths in a given year. No one ever prints exactly how hard the Federal Aviation Administration, the other government agencies involved in aviation, and the General Aviation Industry try as a unit to teach, practice, and encourage safety and recurrency on a daily basis. Yet it still happens, and we still ask why?

Approximately 75% of all our accidents are "Pilot Error." What does that mean in simple terms? If the cause of an accident is something that the pilot has received training for or that is common knowledge and something the pilot should have been aware of and wasn't, that is pilot error. We train from day one to deal with whatever goes wrong with the airplane. We practice engine-out procedures, emergency landings, no radio, failed gear, and anything else that has ever caused an accident anywhere in the world and several procedures that will never even happen. But it seems in some cases that the training never seems to kick in quick enough when the real thing occurs.

Pilot error will always be number one because man and machine have problems cooperating or with cohabitation in the same general area. Pilot error includes complacency, lack of recurrency, lack of experience in present conditions, or poor performance. Most of us in aviation agree that pilot performance plays a big role in the outcome of each maneuver and the ending of the flight. But we are always looking for that special something that contributed to the pilot getting behind the power curve and doing something dangerous or deadly.

Weather is the most talked about problem in aviation and the one thing we have the least control over. I remember as a young instructor flying out of Nashville, Tennessee, before we had a FAA Flight Service Station. We had an office of the National Weather Service on the field and a well-known meteorologist that staffed the office. I would always take my students by and introduce them, and he would give them an elaborate report that covered everything he knew and believed about weather. His closing statement as we started for the door was always the same, "And that report is guaranteed for about 30 minutes." If no other truth was told at that meeting, the parting statement was definitely true. I miss him and his honesty.

Another cause of accidents is mechanical failure. If nothing else in aviation has a chance at reaching perfection and promoting aviation safety, the standards used to certify and put aircraft in service are certainly ranked the highest. This area covers engine and propeller failure and does not exclude some pilot error for fuel mismanagement or contaminated fuel. Mechanical failure is responsible for a large number of accidents because of handling by so many—pilots, line personnel, and mechanics, just to name a few.

Metal fatigue or airframe failures, examples of structural failure, are usually caused by a couple or three reasons. Weather again, design flaws, or improper operation by the pilot. Overstressing a design, good or bad, will cause it to fail. When I think of the thousands of hours that little Cessna 150 has given aviation in service, I wonder why they couldn't have copied some of the features to make airframes and wings and sheet metal and landing gear last longer and be safer.

And then there's the least desirable way to end a flight ... having a collision with the ground, a fuel station, a hangar, or even worse, another airplane on the ground or in the air. We tend to blame this on whomever we can, but the FAA and the NTSB favor the pilot in command. I've found over the years that Air Traffic Control really has very little to do with the way that I fly my flight. I've already made the decision myself when I call them.

So whatever we do and wherever we end up, generally, the pilot has the most influence on the outcome and safety of each flight. Although I'm not always 100% in agreement with the FAA and the NTSB, as a pilot I know from daily experiences who is in charge and how a lot of accidents come about. Although this article is full of facts, it is very sincere, certainly from the heart, and written to let everyone know how those of us in aviation are always striving to improve on an already enviable record. We keep volumes of statistics that show why, when, where, what, and how, and then learn all we can from each occurrence.

Each crash yields evidence that might prevent another crash or save a life in the future. The training we all go through will then be broadened to cover anything that the pilot could have done differently.

The sad truth of the whole matter is that most of us in aviation, including instructors, mechanics, Air Traffic Controllers, Flight Service Stations, and even the Federal Aviation Administration, are doing just about all we can. This doesn't mean we will level off where we are today, but as long as we fly, drive, walk, run, and move people from point to point, we will have a few accidents. Humans operating machines can only hope for a safety record that is perfect. In this business we say what happened was an "aviation loss," but in truth it has a devastating effect on many. And as I said at the beginning of this article, for what we will learn from what happened, it is a terribly high price to pay for information. That's my belief and I'm sticking with it.

And now, the two greatest words ever spoken by a speaker or a writer, "in closing..." After writing at length about aviation safety, if one person was reached and helped to better understand the causes and reasons behind aviation crashes, this article was a success. If I have reached just one pilot and helped him or her think about making some changes in the way the pilot does business, I have certainly succeeded.

Thank you for taking the time to read this story. It was written with the hope that I never again have to see a friend or fellow pilot go down. The following statement has been on my business card for many years. I thought it up a long time ago when I helped set up meetings for the FAA as an Aviation Safety Counselor. "Accidents are caused and therefore preventable." Safety and recurrency will always go hand in hand.

+

Jim Trusty was the 1997 General Aviation Industry's National Flight Instructor of the year and still teaches full-time as a "Gold Seal" instructor in Smyrna, TN.

IN CASE YOU MISSED IT

The top photograph on page 25 is a 1/6 scale model of Glenn's F-86 built by Rene Alvarez, Operations Safety Program Manager, Miami Flight Standards District Office. The model took about seven months to build and about four months to detail and paint. The model weights 22 pounds dry and is powered by a RAM 750 turbine engine. The engine uses Jet A for fuel and develops 18 pounds of thrust. The model is capable of speeds of over 200 mph, but for scale speeds it is usually flown at about half throttle.

The model has all the functions of the full-size aircraft. It has flaps, two positions; leading edge slats; speed brakes; drop tanks; sliding canopy; and wheel brakes. The fuselage is covered with one mil. aluminum tape simulating individual panels and rivets. Each rivet was made by inscribing each one into the tape. There are about 70,000 simulated rivets on the aircraft. The wings are painted with PPG auto paint and the insignias and all the nomenclatures are airbrushed. No decals were used. The model has made 60 flights.

The real jet is owned by Mike Keenum of Illinois. Mike flies his beautiful F-86F around the country on the air show circuit doing a dogfight routine with a MIG-15.

Keenum's F-86 has the markings of John Glenn's F-86 with the exception of the highly polished fuselage and high gloss paint on the wings. Keenum's jet is painted for the air show circuit, not combat. Keenum provided detail photos of his real jet so that Alvarez could do the detailed work on the model. Both aircraft are American classics. One is real...the other is a model. Did you know the difference?

• Mountain Flying Issue Comments

As the Manager of the Boise Flight Standards District Office (FSDO), I want to thank Thelma Bullinger and *FAA Aviation News* for the great article on mountain flying featured in the April issue of the magazine. As a former commercial pilot flying in the Idaho and Montana areas and a former FAA operations aviation safety inspector here in the Boise FSDO, Thelma knows the risks of mountain flying and the need for local mountain flight training for those pilots new to the area.

The magazine listed FAA safety program managers, several air taxi operators, mountain flying clinics, and some valuable sources of information for anyone planning on visiting or flying into the northwest wilderness areas.

I would like to list two additional operators who may also be contacted if your plans include a trip into the Idaho Wilderness Area. They are Access Air based at the Boise, Idaho airport, phone number (208-387-4984); and Joseph H. Spence (541-426-3288) in Enterprise Oregon.

In closing, please remind everyone that they can always call one of the Safety Program Managers in our part of the world for advice or help. John Goostrey's telephone number in Boise is (208) 334-1238. His e-mail is john.goostrey@faa.gov. Jim Cooney is the Ops SPM at the Helena FSDO in Montana. His telephone number is (406) 449-5270. His e-mail is james.cooney@faa.gov. Tom Forchtner is the Ops SPM at the Denver FSDO. His telephone number is (303) 342-1106. His e-mail is tom.forchtner@faa.gov.

John Walker
Manager, Boise FSDO

Please pass along my thanks to Thelma Bullinger for her very interesting article in the April 2001 *FAA Aviation News*' mountain flying issue.

I have done a mountain checkride, while in Colorado Springs, CO, visiting my son and family. I try to get out to the airport every time we're out there to do some flying and to stay used to the altitude difference. Here in Illinois, we are about 800 feet above sea level. That is quite a bit different from the 7,000 feet out there. Now that I am retired, we get out there about five to six times a year, and one of these times it will be in our C-172. I have flown a *Cardinal* and a Piper *Dakota* out to Colorado in the past, but I still do my mountain flying with an instructor. Ms. Bullinger's article really peaked my interest, and I hope to get up to Idaho and fly with one of the mountain flying operators, soon. It really looks beautiful.

Tim Coltrin
Glendale Hts., IL

Thank you for your comments. The country out there is beautiful.

• VFR Clearance

Please clarify the following for me. According to the *Aeronautical Information Manual* (AIM) paragraph 5-4-23, Landing Priority, "ATCT's handle all aircraft, regardless of the type of flight plan, on a 'first-come, first served' basis." Unfortunately, this is not the case at Teterboro, NJ (TEB). A typical VFR call to TEB tower will be answered with the following response: "Remain clear of the Class D, expect a 10-minute delay." During this time, aircraft on IFR flight plans check in and are routinely cleared to land. Also, other aircraft are cleared for takeoff. It is no secret that the tower at TEB gives priority to IFR aircraft and turbines in general. What gives the tower the right to give the preferential treatment in contrast to the AIM?

While I am on the subject of TEB, VFR aircraft have been required to get a "VFR clearance" from clearance delivery prior to taxi. For the most part, the clearance is to "remain outside Class B airspace" and a squawk code is given. This creates radio frequency congestion, especially while waiting for the full route IFR clearances to Europe, South America, and the Caribbean. They didn't bother to call traffic for us the other day, so why bother with a squawk if they don't provide the service? Thanks again.

Name withheld by request

Air traffic controllers are required to handle non-emergency aircraft on a first come, first served basis. When a controller tells a pilot to "expect a 10 minute delay," the instruction is necessitated by workload, not landing priority.

IFR aircraft and aircraft already receiving VFR enroute services are accommodated before VFR aircraft that call below or near Class D airspace because sequencing decisions are already made. Adjustments to accommodate a "pop-up VFR arrival" by re-sequencing aircraft significantly increase controller workload during busy sessions.

Controllers assign beacon codes so that traffic advisories can be issued on a workload permitting basis. The reminder to "remain outside Class B airspace" is given because a clearance to enter Class B airspace is required and as stated above, traffic volume and controller workload are taken into account before issuing a clearance. Traffic advisories are provided in Class D airspace on a workload-permitting basis.

• Crossed Hold Short Line

How far over the hold line can an aircraft extend before it becomes a runway incursion statistic?

Name withheld
via e-mail

According to the Flight Standards representative to the Runway Safety Program Office, if the aircraft is over

the line, it is an incursion. (Its official definition is: Any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in loss of separation with an aircraft taking off, intending to take off, landing, or intending to land.) So, if your aircraft is even an inch over the line, it is a runway incursion. When an aircraft crosses the hold short line, it enters the Runway Safety Area (RSA).

• Define Immediately

I understand that there has been a recent change to the *Aeronautical Information Manual* in declaring of an emergency. What is this new option?

Cam Poschel
via Internet

The pilot/crew now have an alternative to declaring an emergency. They can now declare an imminent situation through the use of the word "Immediately" and state a desired action; i.e., climb, descend, turn, etc. This new definition of the word "immediately" appeared in Change 2 of the Airman's Information Manual *(AIM), dated January 25, 2001. The AIM's Pilot/Controller Glossary definition was expanded to include pilots and will now read:*

"IMMEDIATELY - Used by ATC or pilots when such action compliance is required to avoid an imminent situation."

• Back Cover Photograph

You have made a mistake on the back cover of your January/February 2001 issue of *FAA Aviation News.* That is not a Kolb *FireFly*. That is a Kolb *Mark III*. The *FireFly* is a single-place Part 103 Ultralight. The *Mark III* is a two-place machine that is usually registered under the experimental category, but can be built to meet the training exemption for a two-place Ultralight trainer.

That photo is a picture of the Kolb Aircraft, Inc., company-owned *Mark III* that was used by the company for sales demonstration as well as customer training. I think I should know since I was the person flying the demonstrations and giving the training.

I was very please to see the FAA use a photo of an ultralight in your publication, I simply want to make sure you get it labeled correctly.

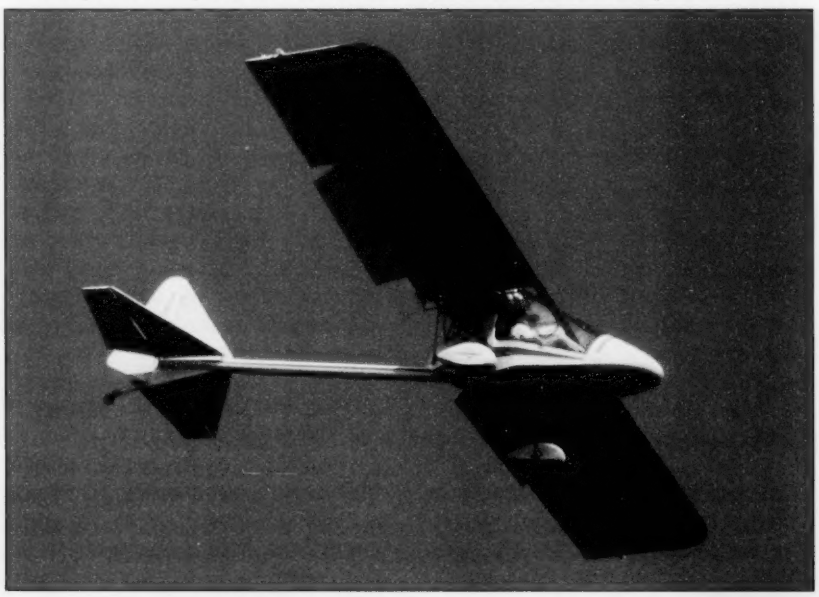
Dan Kurkjian
Via email

Thanks for correcting us.

• Reversed Photo

Two readers wrote telling *FAA Aviation News*, that the photographs on pages 17 and 19 of the March 2001 issue were reversed. "The instrument panel should be on the left," stated one reader.

Yep: Great catch guys. Our resident pilots blew the checklist on those photos. We may have to give our staff some remedial photo training. With the FORUM Editor's plane in parts for more than a year now (see picture of his panel on page 11), he has lost all sense of direction! Sorry.



FAA AVIATION NEWS welcomes comments. We may edit letters for style and/or length. If we have more than one letter on the same topic, we will select one representative letter to publish. Because of our publishing schedules, responses may not appear for several issues. We do not print anonymous letters, but we do withhold names or send personal replies upon request. Readers are reminded that questions dealing with immediate FAA operational issues should be referred to their local Flight Standards District Office or Air Traffic facility. Send letters to H. Dean Chamberlain, FORUM Editor, FAA AVIATION NEWS, AFS-805, 800 Independence Ave., SW, Washington, DC 20591, or FAX them to (202) 267-9463; e-mail address:

Dean.Chamberlain@faa.gov

DIAMOND AWARD WINNERS

The FAA's Diamond Award of Excellence and the Certificate of Excellence "Diamond Award" were presented to Bombardier Aerospace Learjet, Inc., at Bradley International Airport, Windsor Locks, CT. To qualify, Bombardier trained 100% of its employees with each receiving an Aviation Maintenance Technician Award. Both awards were presented by the Windsor Locks FSDO Manager and the Airworthiness Safety Program Manager. (Left to Right) from Bombardier: John Eklund, QA/QC Manager; Bill Bowen, Training Manager; and Jim Scavotto, Vice President East Region; from FAA: FSDO Manager Ken Roach and Airworthiness Safety Program Manager Pete Lindberg.

OSHKOSH NOTAM AVAILABLE

The NOTAM for AirVenture Oshkosh 2001 is available. For a free copy of the NOTAM, you can call the Experimental Aircraft Association (EAA) at 1-800-564-6322. You can also view or download the NOTAM on the Internet at <www.faa.gov/NTAP>; <www.airventure.org>; or EAA's home site at <www.eaa.org>.

The special flight procedures outlined in the NOTAM are effective from July 21-July 30, 2001.

The self-contained booklet describes preflight procedures and flight procedures for Oshkosh, Fond du Lac, and Appleton airports. Included in the booklet is information on the arrival and departure procedures for Vette Seaplane Base, military warbirds, no-radio arrivals, IFR and VFR aircraft, helicopters, and ultralight vehicles.

The booklet explains how Canadian pilots flying Canadian registered experimental amateur-built aircraft or basic or advanced ultralight aeroplanes may obtain an FAA Special Flight Authorization (SFA) to operate in the United States.

The information tells how Canadian pilots may obtain a SFA from the FAA's Internet website.

The NOTAM includes frequencies, diagrams, routes, procedures, and important safety information, both flight and ground, including the need to make cockpit signs for those aircraft landing at Oshkosh for the fly-in. All pilots flying into the Oshkosh area during this period need to be aware of the special procedures contained in the NOTAM.

2001 GENERAL AVIATION AWARDS PROGRAM WINNERS ANNOUNCED

The 2001 General Aviation Industry Awards Program has chosen Phillip J. Poynor of Farmingdale, NY, as the Certificated Flight Instructor of the Year; Dwain A. Chase of Mesa, AZ, as the Aviation Maintenance Technician of the Year; and Brenda Cori Olson of Tusco, AZ, as the Avionics Technician of the Year. A formal presentation to the winners was given during ceremonies at the Helicopter Association International's conference in Anaheim, CA on February 10.

Phillip Poynor has been actively involved in the aviation industry for over 30 years with over 9,000 flight hours and holds an ATP certificate. He is an active Gold Seal Flight Instructor with 20 years of experience and was named one of the first NAFI designated Master CFI's in 1997. Since 1981, he has been the general manager of Nassau Flyers, Inc., which is a large, independent FAR Part 61 flight school in Farmingdale, NY. In addition to his activities at Nassau Flyers, Mr. Poynor is an active FAA Aviation Safety Counselor, an attorney, and a full-time associate professor of aviation at State University of New York at Farmingdale. He was described by one of his peers as a true "Renaissance Man." He is a very active supporter of general aviation and is constantly talking with people about flying and encouraging them to live their dreams and learn to fly—especially minorities and women.

Dwain Chase has over 24 years of aviation maintenance experience, holds an Airframe & Powerplant Certificate (A&P), and has been the Director of Maintenance for Swift Aviation since 1997. In this position he developed a computerized tracking program to monitor the aircraft fleet, record pilot times, aircraft times, and scheduled maintenance intervals. This system has built in warnings to ensure safety and compliance with FAA regulations. As a current member of the Cessna Sovereign Maintenance

Review Board, he is developing the Sovereign Maintenance Program in conjunction with Cessna for all operators. Over the years, Chase's number one priority has been aircraft safety. This has been reflected in his endless contributions of knowledge and guidance to other technicians, engineers, and operators in the aviation industry.

Brenda Olson is a Quality Assurance Inspector for the Global Express Quality Department—the first woman to hold such a position for Bombardier Aerospace. She began her aviation career in 1993 as an apprentice A&P mechanic and received her certification in 1994. However, in 1995 she decided to further her education by training in avionics and would later transfer to that field. She has made many contributions to the aviation industry during her career and sets high standards as an example to others. She has earned a ruby and a diamond Maintenance Award from the FAA and in her spare time is currently pursuing a bachelor's degree in Professional Aeronautics with a minor in Safety at Embry Riddle Aeronautical University. Olson is also a Technical Sergeant in the U.S. Air Force Reserve and holds a Craftsman Seven Level, the senior trained avionics technician in her shop.

The national awards program is a cooperative effort between the Federal Aviation Administration (FAA) and the aviation industry. The awards are presented annually to reward outstanding contributions to the aviation industry by the Certificated Flight Instructor, the Aviation Maintenance Technician, and the Avionics Technician in promoting safety and education. The winners are selected from FAA regional winners and are chosen by a national selection committee of aviation professionals. Nomination forms are available from your local FAA Aviation Safety Program Manager and need to be submitted by December 31, 2001 to be eligible for the 2002 awards.

BLACK PILOTS OF AMERICA'S SUMMER FLIGHT ACADEMY

Every summer the Black Pilots of America (BPA) conduct their Summer Flight Academy in Miami, Florida. Students stay at Florida Memorial College, and all flying is done out of North Perry Airport. Students who attend the Summer Flight Academy are either sponsored by Chapters of the Tuskegee Airmen or by private individuals.

Class of 2000 BPA Summer Flight Academiy

The Academy ground school is divided into two parts—theoretical and operational. In the theoretical part, students prepare for the FAA Private Pilot written test, and in the operational part they learn the systems of a Cessna 150 and 172. They also learn flight maneuvers and get their pre-solo written exams. The operational class is augmented by desktop computers with flight simulator programs.

If you know someone who would benefit from the BPA Summer Flight Academy—remember we facing an upcoming pilot shortage—or if you'd like to sponsor a student, go to <www.blackpilots-america.org> for information. Or you can contact BPA at Black Pilots of America, P.O. Box 7463, Pine Bluff, AR 71611; phone is (870) 879-6612 or e-mail is <thesky@usa.net>.

12th WIAC A RECORD-BREAKER

The 12th annual Women in Aviation International Conference was the largest and most successful conference to date for the only recently independent organization. Registrations were up. Attendance was up, and the amount of scholarships given is not far from the one million-dollar mark.

"One of the greatest success stories of Women in Aviation, International has been the phenomenal growth and diversity of the scholarship program," said Dr. Peggy Chabrian, President of Women in Aviation, International.

At the Reno, Nevada conference this past March, scholarships were awarded in dispatcher training, engineering, flight training (from private pilot to type ratings), maintenance, aviation management, and continuing education. Some 572 individuals applied for the scholarships, which amounted to $901,925. The application deadline for the 2002 scholarships to be awarded at the 13th annual WIAI Conference is December 7, 2001. For further information on how to apply for the scholarships, contact Mary Ann Eiff at <eiff@gte.net> or go to WIAI's web site, <www.wiai.org>.

FAA organizations Flight Standards and Aircraft Certification recruited at the WIAI conference, as they have for many years. More than 500 attendees picked up information packets on how to apply to be an FAA aviation safety inspector. Since FAA began recruiting at WIAI, between 40 and 50 women in aviation have joined the FAA.

The 13th Annual WIAI Conference with be held March 13-15, 2002, in Nashville, Tennessee.

Editor's Runway

from the pen of Phyllis-Anne Duncan

ODDS AND ENDS

A small clarification on last issue's editorial "Air Rage." When I mentioned that as an FAA employee, I couldn't allow an obvious non-compliance to go unchallenged, I should have clarified that as an employee with a knowledge of regulatory requirements, etc. I didn't mean to imply that every FAA employee can challenge a crewmember. That is definitely NOT the case. There are some of us who are not inspectors but who have a high level of technical knowledge, can assess a situation, and discuss it with crewmembers. Only inspectors, however, can take action. I may not be an inspector, but I know how to call one when needed. So, rest assured, the aisles of your airliners will not be "policed" by the unqualified.

Also on that editorial, someone wanted to know why I just didn't put my bag under my own seat. Easier said than done because beneath my seat was the underseat storage space for the person behind me. That's the problem with this particular exit row configuration (facing seats); you have six people sitting on that side of the aisle but only three underseat storage areas. However, the rearward facing seats have a bulkhead behind them, so there is plenty of room for multiple bags beneath the one seat. On this particular flight, though, my fellow traveler was having none of it. This airline, by the way, does an excellent job in my opinion of policing the exit row situation but is in the process of changing their exit row configuration to all forward-facing seats.

We've had a few complaints about the lateness of the magazine's arrival; notably our Superbowl issue arrived for some readers well after that competition had occurred even though we got it to the printer in early December. We asked for anyone else who had experienced a problem to let us know, and several of you did. Here's what we're doing about it.

Subscribers receive their copies from the shipping docks of the U.S. Government Printing Office. In an effort to keep down the subscription costs over the years, U.S. GPO ships the magazine to subscribers via third class bulk mail. Though this reduces the mailing costs, it means that the mail is of a low priority and is delivered only when space on a truck allows. I know for certain that in Juneau, Alaska (which is reachable only by boat or air) that magazines stay on a loading dock sometimes for months until there is room for them in a water or air shipment. As a result, we've discussed with U.S. GPO some alternatives to improve delivery, and we're going to try each of them from the least disruptive to the most.

First, we will notify GPO when we deliver copy to the printer rather than when the printer delivers the completed copies to GPO shipping. That way, GPO can order the mailing labels earlier and have them ready when magazines arrive. GPO estimates this could save as much as a week, and it adds no cost to the process. That's why we're doing that first.

A couple of other alternatives exist as well. We could ship the magazine First Class Mail, which could add as much as $8.00 to $10.00 a year per subscription. We could also reduce the number of issues to six but increase the number of pages per issue to 32. That way you would get the same (approximately) number of pages per year, and a six-issue production schedule would allow us more flexibility in making certain time-sensitive information is provided to you in, well, a timely manner.

We're not allowed to survey you without permission from the Office of Management and Budget, but if you want to let us know how you feel about this situation or your preferences about any improvements in delivery we can make, you can always e-mail me at phyllis.duncan@faa.gov. I might not be able to respond to every e-mail, but I will read each of them. Promise.

Well, that's about it until I have to clear another exit row. (Just kidding.)

'Til next time...

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